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ABSTRACT

Career education projects in the Texas school districts of Fort Worth, Harlandale, and Houston, conducted from January 4, 1972 through July 3, 1973 are summarized in this document. Project similarities and differences in the three districts are presented at the elementary, middle, and high school levels, with career guidance emphasized in all projects, and job placement components developed for the high school level. Reported results indicate an overall acceptance of career education and general agreement that the programs had expanded student awareness of career opportunities. It is noted that questionnaires used in the projects show a need for improved communication, for expanded in-service training, and for more systematic evaluative procedures. Lists of major materials developed in each district are appended to the report. Evaluations of the projects by the Center for Human Resources of the University of Houston comprise two-thirds of the document. Data and summary comments are presented for each district. Evaluation activities, which included visits to each participating school and interviews with administrators, counselors, and teachers, are reported. Interview forms and responses are appended to the evaluation report. (TA)

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FINAL REPORT

Project No. V261028L
Grant No. OEG-0-72-0728

Research and Development Projects in Career Education

Conducted Under
Part C of Public Law 90-576

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EDUCATION & WELFARE
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August 1, 1973

CE 008 110

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The project reported herein was performed pursuant to a grant from the Bureau of Adult, Vocational, and Technical Education, Office of Education, U. S. Department of Health, Education, and Welfare. Grantees undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Office of Education position or policy.

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Preface

Within the past few years, career education has become a national priority. It has been suggested as the cure for a myriad of social and educational maladies, from manpower shortages and increased unemployment to dropout rates and rivalry between academic and vocational educators. Although career education obviously cannot provide the solution to all our domestic ills, it has certainly emerged as a significant instrument for improving the quality of public education and providing American youth with the information, values, and skills necessary to function productively within an increasingly complex society.

The State of Texas, in its effort to be in the vanguard of vocational education, embraced the concept of career education even before the phrase had been coined. Since 1969, for example, pilot programs in Occupational Orientation have been initiated in 28 Texas public schools, supported by a combination of Federal, state, and local funds. However, former Commissioner of Education Sidney P. Marland's endorsement of career education and his generous allocation of funds through state research coordinating units to local schools enabled Texas to develop comprehensive programs supporting the concept of career education. Projects were initiated in three Texas public school districts: the Fort Worth Independent School District, Fort Worth, Texas; the Harlandale Independent School District, San Antonio, Texas; and the Houston Independent School District, Houston, Texas.

As this report reveals, the projects have proved to be quite successful. Partially because of their efforts, the State Board of Education has placed career education on its priority list and created both an advisory committee and coordinating council for career education in Texas. Comprehensive career education pilot projects have now been initiated in eleven additional independent school districts, and the state's regional education service centers have established pilot projects in approximately one hundred Texas schools. Innumerable other districts have made use of the curriculum materials and professional expertise developed within the three original and other supporting projects.

The results of these research and development projects in career education, therefore, have great significance for public education at both the state and national levels. Within the following pages may be found a glimpse of our educational future. And that future is indeed a promising one.

John R. Guemple, Associate Commissioner
Department of Occupational Education
and Technology
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SUMMARY OF THE REPORT

Summary of the Report

Time period covered by the report

The projects were initiated January 4, 1972, and terminated July 3, 1973.

Goals and objectives of the project

Associate Commissioner Robert M. Worthington, in a policy paper released September 9, 1971, outlined the objectives of state research and development projects in career education which were to be supported with discretionary funds from the U. S. Office of Education. He emphasized that each project should be comprehensive in nature, should contain a strong guidance and counseling component and, in addition, should fulfill one or more of five additional objectives, which included the development of career awareness programs at the elementary level, career orientation programs at the middle school level, job preparation programs at the high school level, and placement programs for exiting students.

Emphasis on these objectives varied among the three Texas school districts, according to the scope of the career education programs which had been established before initiation of the federally funded projects. The Fort Worth project included all the objectives outlined above; its primary goal was to develop and implement "a systems concept that encompassed all components of the educational system." Four components were identified and specific objectives were established for each; these components were: (1) the elementary level; (2) the middle school level; (3) the high school level; and (4) placement.

Objectives for the Harlandale project were similar to those of the Fort Worth project. As the superintendent of the Harlandale Public Schools stated in his letter of assurance, "the present need is to further develop a more comprehensive program with components which will provide for research and curriculum development, guidance and counseling, and job placement and follow-up. Components also need to be implemented which will provide a liaison with the business community" and establish parental involvement.

The Houston Independent School District had already established, on a limited basis, programs in Occupational Awareness at the elementary level and Occupational Orientation at the middle school level, in addition to extensive vocational training programs at the high school level. Thus, the major focus of the Houston project was "to complete development of the Occupational Awareness program materials and to determine the effectiveness of such programmatic effort through a comprehensive research design," prior to expansion of the program to include all Houston elementary schools. Other objectives included: (1) to provide additional guidance and counseling materials and techniques for teachers; (2) to add to curriculum preparation activities at the middle school level; and (3) to evaluate and research the current development projects.

Procedures followed

The Fort Worth and Harlandale projects followed similar procedures in implementing their career education programs at the elementary level. Curriculum guides and instructional materials were prepared to aid in the development of "occupational awareness" among elementary students; in addition, counselors and other project personnel worked with elementary teachers to acquaint them with the philosophy and techniques of career education. In the Houston project, where a program of occupational awareness had already been implemented at the elementary level, emphasis was upon evaluating the ongoing program, by means of classroom observation and development of the Houston Occupational Awareness Investory, to be administered as a pre-/post-test evaluative measure.

At the middle school level Fort Worth project personnel worked to develop a pilot course in Career Opportunities, which would introduce students to career opportunities and life styles associated with various vocations, and help them to assess their own interests and abilities and to make tentative explorations into one or more fields of their choice. Teaching techniques included student research, field trips, and resource speakers. In addition, a career resource center was established in each school, and teachers were encouraged through in-service training and contact with counselors to give "occupational orientation" to their subject matter.

In the Harlandale and Houston projects, the primary focus at the middle school level was to develop curriculum guides and materials which would assist teachers in integrating career education concepts into the academic curriculum. In addition, counselors in the Harlandale project administered aptitude tests and interest surveys to students and counseled them concerning future career possibilities and programs of study which would maximize those possibilities.

At the high school level, all three projects established job placement and follow-up components to assist students in obtaining work or entering a post-secondary academic or vocational-technical program. Fort Worth also established a career resource center at the high school level, developed "mini-courses" in career opportunities, and created an advisory committee at each high school. Harlandale developed curriculum guides for a number of high school courses. All three projects placed strong emphasis on career guidance at the high school level.

Guidance and counseling was a key emphasis in all projects, particularly the Fort Worth and Harlandale projects, whose career education programs were still in the developmental stages. In addition, these two projects sought through various techniques to involve parents and the business community in career education activities; Harlandale established a "community involvement component" to achieve this goal.

Results and accomplishments

The Fort Worth project reported success in conveying the concepts of career education to teachers, students, parents, and members of the business community. Development of teacher training, career counseling, and evaluative techniques was a significant achievement of the project. At the elementary level, curriculum guides and supplementary materials were developed for grades K-5; the report notes that, by the project's termination date, some eighty percent of elementary teachers in the project schools were integrating career awareness concepts into their curriculum. At the middle and high school levels, "pilot" and mini-courses in career education were established, as were career resource centers. The placement center counseled 472 graduating seniors, and helped 361 of these to secure employment.

Harlandale reported similarly successful results in establishing the importance of career education. Career guides were developed for 42 courses at all levels; additional materials were developed or purchased for use in resource centers, teacher training sessions, and dissemination activities. The community involvement coordinator made numerous contacts with the business community and compiled a booklet of resource speakers for use by teachers. The placement coordinator assisted 907 students to obtain jobs during the period from March, 1972, to June, 1973; 63 percent of these were full-time, 25 percent permanent part-time, and 12 percent day jobs. The placement component demonstrated its cost efficiency by noting that the total annual income tax provided by the 907 jobs amounted to $240,540.00. In addition, follow-up data were gathered for 6,000 students in grades 8 through 12.

The evaluation component of the Houston project revealed that more and more elementary teachers were utilizing career awareness concepts in the classroom; the number of teachers participating in career awareness in the pilot schools increased from 47 percent to 73 percent during the project period. In addition, teachers who initially had expressed concern about the feasibility of career awareness began to express concern about specific methods of implementation and the need for additional materials. The Research Services Department of the Houston Independent School District developed a pre-/post-test, which was administered during the project period. Test results did not support the original research hypothesis that a significant difference in pre-test and post-test scores would occur in the 36 schools which had established career awareness programs. However, a number of uncontrolled variables were noted which probably accounted for the negative test results. In addition to the evaluation activities, curriculum aids were developed at the middle school level, and counseling techniques were devised for teacher use.

Evaluation

A third-party evaluation of all three projects was conducted by the Center of Human Resources of the University of Houston. The evaluative measures utilized were questionnaires to teachers, counselors, and administrators, and program observation.

Results indicated an overall acceptance of career education on the part of teachers, counselors, and administrators, and general agreement that the programs had succeeded in expanding student awareness of career opportunities and the attitudes and backgrounds necessary for success in specific vocations. However, some confusion about specific career education concepts on the part of all three groups was noted. Questionnaires indicated a need for improved communication among administrators, teachers, and program personnel; for expanded in-service training; and for more systematic evaluative procedures.

Conclusions and recommendations

Conclusions were that career education had become a viable part of the educational process at all levels in the public schools, and should be expanded. In the Fort Worth Independent School District, recommendations were made and adopted to expand the program to include sixteen additional schools.

Both the Fort Worth and Harlandale reports noted that a strong guidance and counseling component was essential to the success of career education, and that development of effective teacher training techniques was necessary as well; they also noted that the community at large had demonstrated enthusiasm for and appreciation of the program's goals and methods.

The Houston project noted the difficulty of establishing evaluative techniques for measuring the effectiveness of career education programs; uncontrolled variables, such as "intra-session history effects" and "prior multiple-treatment interference" tend to distort test results.

BODY OF THE REPORT

Rationale and Background

Statement of the Problem

The attempt, throughout the history of the United States, to provide meaningful educational experiences in the American public school system has produced a wide variety of educational approaches and philosophies. No approach has received more attention in recent years than that of career education.

The need for a comprehensive program in career education has arisen from what James Spradley terms the "discontinuity between childhood and the world of work" in American culture,[1] and from the complexities involved in making rational career choices in a modern technological society. The vast increase in the number of unemployed youth; the overabundance in the labor market of individuals with college degrees; the failure, in many instances, of vocational education programs to provide students with the skills most needed by business and industry--all these developments indicate that American youth have not been provided with the information and attitudes necessary to make realistic occupational choices. Students need to be made aware--as early in their educational careers as possible--of the realm of occupational choices which will be available to them, the skills necessary for particular jobs, and the financial and social implications of the occupations they may choose to enter. More and more educators are concluding that career education programs can be effective means of conveying such information.

Background of the Project

Career education has been defined in many ways by many educators. For some, the term seems almost infinite in scope; for example, Hoyt, _et_. _al_., state, ". . . career education is preparation for all meaningful and productive activity, at work or at leisure, whether paid or volunteer, as employee or employer, in private business or in the public sector, or in the family,"[2] and Sterling McMurrin asserts, ". . . career education is properly synonymous in meaning with _education_ . . . all education, in addition to whatever else it may be, should be career education."[3] In the opinion of others, such as T. Anne Cleary or Harold Howe II,[4] the scope of career education should be more narrow. However, most would agree with Spradley that "the goal of career education is to enable every person to make informed choices as he develops his own career,"[5] or with former U. S. Commissioner of Education Sidney P. Marland, Jr., that "career education seeks to remove the assumed distinctions between academic and occupational learning programs, blending them to serve all learners at all levels of instruction . . . "[6]

The concept of career education thus goes beyond the concept of vocational education. It involves far more than the actual training of a student for a particular skill or cluster of skills. Hoyt, _et_. _al_., in a 1973 publication, _Career Education: What It Is and How to Do It_, identify five different components of career education: 1) emphasis, in every academic course at every grade level in the educational system, upon the "career implications" of whatever subject is to be taught; 2) actual vocational skill training; 3) a "comprehensive career development program," including vocational guidance and counseling, field trips, role-playing and work simulation; 4) liaison between the educational community and the world of work, the community at large; and 5) liaison with the home and family environment.[7]

Although the concept of career education cannot be described as new,[8] its dominant position in educational research and development dates only as far back as the last decade. As Grant Venn has noted, the period from 1917--when the first national Vocational Education Act was passed--through the 1960's, was a period of separation between vocational and academic education. Even as vocational education programs were expanded during the early '60's, this separation persisted. However, the 1968 amendments to the Vocational Education Act of 1963--prompted in large measure by a 1967 report by the National Advisory Committee on Vocational Education-- "for the first time called for a true infusion of career preparation into the schools."[9]

In late 1971, then-Commissioner Marland delivered a speech before a convention of the National Association of Secondary School Principals which has been characterized as "the first major statement on career education" in the United States.[10] Commissioner Marland, in expressing his support of a concept which had been slowly developing among educators since the early twentieth century, in effect issued a mandate to the educational community to implement what he terms "the largest single initiative toward educational change at this time."[11]

At the same time, Commissioner Marland, exercising the authority granted him by the 1968 amendments, demonstrated that his support of career education was more than verbal by allocating massive sums of Federal funds to research and development projects in career education--$42.1 million in fiscal year 1972 alone. In September 1971, he announced that seven million dollars in discretionary funds which were available to him through Part C, Section 131(a) of Public Law 90-576, together with two million dollars from funds provided under the Byrd Amendment to the Cooperative Research Act, would be released to state research coordinating units for the purpose of launching demonstration projects in career education. He thus put into action his belief that, to function effectively, career education "must not be a Federal program; it must be a self-determining reform by local school systems, encouraged and assisted by State leadership."[12]

Texas' share of the nine million dollars in Federal funds amounted to $578,266. These funds were used to establish three comprehensive programs in career education--one in the Fort Worth Independent School District, Fort Worth, Texas; another in the Harlandale Independent School District, San Antonio, Texas; and a third in the Houston Independent School District, Houston, Texas. These school districts were selected by a review committee of the Texas Education Agency and invited to submit letters of assurance to the Bureau of Adult, Vocational, and Technical Education of the U. S. Office of Education. Selection of school districts was made on the basis of ongoing programs in career education in each district. The required letters of assurance were submitted and approved, and the projects were initiated January 4, 1972, with a termination date of July 3, 1973.

Footnotes

[1] James P. Spradley, "Career Education in Cultural Perspective," in Larry McClure and Carolyn Buan, eds., ESSAYS ON CAREER EDUCATION (Portland, Oregon: Northwest Regional Educational Laboratory), 1973, pp. 3-16.

[2] Kenneth B. Hoyt, et. al., CAREER EDUCATION: WHAT IT IS AND HOW TO DO IT (Salt Lake City, Utah: Olympus Publishing Company), 1972.

[3] Sterling M. McMurrin, "Toward a Philosophy for Career Education" in McClure and Buan, pp. 19-27.

[4] T. Anne Cleary, "New Directions for Career Planning," in McClure and Buan, pp. 39-53; Harold Howe II, "Remarks Regarding Career Education," in NASSP BULLETIN, March, 1973, pp. 40-51.

[5] Spradley, op. cit.

[6] Sidney P. Marland, Jr., foreward to McClure and Buan, eds., ESSAYS ON CAREER EDUCATION.

[7] Hoyt, et. al., op. cit.

[8] Ibid.

[9] Grant Venn, "Career Education in Perspective: Yesterday, Today, and Tomorrow," in NASSP BULLETIN, Volume 57, No. 371, March, 1973, pp. 11-21.

[10] Ibid.

[11] Marland, op. cit.

[12] Ibid.

Goals and Objectives

Goals and Objectives

In a policy paper released September 9, 1971, Associate Commissioner Robert M. Worthington outlined the objectives of the projects to be funded by the U. S. Office of Education. He emphasized that the goal of each project should be to establish "a meaningful, comprehensive, well-developed career education program, with a strong guidance and counseling component." In addition, each project should fulfill one or more of the following objectives:

1) To develop "programs designed to increase the awareness of each student and to develop in each student favorable attitudes about the personal, social, and economic significance of work."

2) To develop "programs at the elementary level designed to increase the career awareness of students in terms of the broad range of options open to them in the world of work."

3) To develop "programs at the junior high or middle school level designed to provide career orientation and meaningful exploratory experiences for students."

4) To develop "programs at grade levels 10 through 14 designed to provide job preparation in a wide variety of occupational areas, with special emphasis on the utilization of work experience and cooperative education opportunities for all students."

5) To develop "programs designed to insure the placement of all exiting students in either: a) a job, b) a post-secondary occupational program, or c) a baccalaureate program."

Emphasis on these objectives varied among the three Texas school districts, according to the scope of the career education programs which had been established before initiation of the Federally funded projects.

Goals and Objectives: Fort Worth

The Fort Worth project included all the objectives outlined by Associate Commissioner Worthington. Although the Fort Worth Independent School District for several years has maintained programs in grades ten through twelve which prepare students for gainful employment, as well as a more limited occupational development program in the middle school and adult levels, its administration recognized the need to develop and implement a systems concept that encompassed all components of the educational system. Five components were identified initially as necessary to the success of any career education program; these were: 1) the elementary level; 2) the middle school level; 3) the high school level; 4) guidance and counseling; and 5) placement. However, in order to interweave the guidance and counseling needs into a systems approach that would not isolate this component from the developmental process at each major level of development, the guidance and counseling component became a sub-component to each of the other four major development areas. The project staff then developed a set of objectives for each component of the program.

1. Elementary

   At the elementary level, the overall objective was to integrate career education with ongoing school activities and to provide experiences which would permit each student to develop an awareness of many occupations. Specific objectives were:

   a. To develop wholesome attitudes toward career choices and toward work as a means of deriving personal satisfaction from successful performance in an occupation.

   b. To develop an instructional program which would positively affect the attitudes of students' respect for the dignity of work.

   c. To assist students in realizing that school work is important preparation for the future.

   d. To assist students in developing self-awareness and respect for one another.

   e. To assist teachers in integrating career education concepts into their present curriculum without drastically altering that curriculum.

   f. To acquaint the communities involved with career education.

2. Middle School

   At the middle school level, the overall objective was to make career education such a vital part of ongoing school activities that students could clearly relate classroom activities to later participation in the world of work and the obligations of citizenship. Specific objectives were:

   a. To assist students to assess their values, interests, achievements, and other career-related characteristics.

   b. To help students develop desirable attitudes toward work and to appreciate the dignity of every occupation.

   c. To acquaint students with major occupational classifications and relate their assessment information to job fields.

d. To provide opportunities for students to investigate specific occupations extensively based on their individual priorities.

e. To develop in students a basic understanding of the steps in decision-making and to aid them in learning proper ways of finding employment.

f. To help students make proper selections of courses for their high school educational program and to appreciate the value of school achievement and extracurricular activities to job success.

g. To establish a resource center to fulfill the informational needs of the middle school component.

h. To involve teachers in giving occupational orientation to their subject matter.

i. To establish an awareness in parents of the goals and philosophy of career education.

j. To provide information to the business and industrial community of the school district's needs and accomplishments in relation to career education.

k. To evaluate the middle school component and redirect as necessary.

3. High School

At the high school level, the overall objective was to establish projected outcomes for students at the high school level in order that students involved in the career education project study might develop competencies for living and making a living, and might be furnished with a variety of experiences which would facilitate occupational choice or prepare for career advancement. Specific objectives were:

a. To develop in students and teachers a realistic attitude toward the dignity of all work and workers.

b. To acquaint students with a major occupational field or cluster.

c. To develop in students attitudes of respect for and cooperation with employers and fellow employees.

d. To provide special information for students regarding specific employment.

e. To develop in students an understanding of the need for continuing education or training in the various career areas.

f. To develop a continuing program of research and planning.

4. Placement

In the placement component, the overall objective was to establish a service to insure placement of all exiting students either in a job, a post-secondary occupational program or a baccalaureate program. Specific objectives were:

a. To insure that the highest possible percentage of students exiting high school were either employed in their career field or enrolled in a continuing education program.

b. To promote good public relations between school and the business community.

c. To maintain placement and follow-up records required for the purpose of justifying career education.

Goals and Objectives: Harlandale

Objectives for the Harlandale career education project differed somewhat from those of the Fort Worth project. As outlined in the letter of assurance, the current need was to develop a more comprehensive program with components which would provide for research and curriculum development, guidance and counseling, and job placement and follow-up. Components also needed to be implemented which would provide a liaison with the business community and establish parental involvement.

In addition, specific goals and objectives were developed for each component of the project:

1. Research and Development

a. To analyze the instructional content of each course in order to identify the relevance of curriculum concepts to career development, and to compile the resulting data as a resource for teachers.

b. To provide, through the accumulation, development, revision, and organization of occupational information instructional material, adequate resource materials for each grade level.

c. To develop and distribute to teachers a sequential series of guides for the use of career development instructional materials in each grade level, which will include:

- Goals for each grade.
- Suggested strategies for accomplishment of goals.
- Activities appropriate for the students' level of

maturity.
* A compilation of resource persons, materials, and instructional aids.

d. To develop and conduct a program of continuous evaluation and revision to insure that both material and methods are kept up-to-date.

e. To involve all instructional personnel actively in career development.

f. To develop an intensive and comprehensive program for training teachers in the methods of integrating career development into the total program of learning activities.

g. To organize in-service workshops for all teachers to assist them in the use of the study guide for the implementation of career development experiences in their classes.

2. Guidance and Counseling

Elementary Schools

a. To develop a planned program for assisting teachers to guide children through career development experiences.

b. To assist in the identification of learning difficulties, personality problems, and social maladjustment, providing guidance for those whose problems can be corrected within the school environment and making referrals to the proper agency when indicated.

c. To assist teachers in helping children to develop positive emotional, social, and personality growth patterns.

d. To assist teachers in helping children to develop positive self concepts through the Character Education Project.

e. To administer aptitude and achievement tests.

f. To consult with teachers, parents, and other interested persons for improved educational planning.

Middle Schools

a. To assist in providing occupational guidance.

b. To assist teachers in relating their curriculum to career awareness concepts.

c. To administer interest inventories and aptitude tests to all eighth grade students and to interpret results to students, teachers, and parents.

d. To counsel pupils concerning their interests, aptitudes, and abilities as they affect career plans.

e. To provide assistance to pupils in planning their programs of study toward career goals.

f. To assist in the identification of learning difficulties, personality problems, and social maladjustment, providing guidance for students whose problems can be corrected within the school environment and making referrals to the proper agency when indicated.

3. Job Placement and Follow-up

a. To provide information and assistance to each student who seeks part-time or full-time employment.

b. To provide each student with an understanding of the reciprocal rights and responsibilities of employers and employees.

c. To design an information system which will enable the placement office to match the students' interests, abilities and needs with the employers' requirements for each available position.

d. To assist out-of-school youth in obtaining the guidance and training or retraining necessary for employment.

e. To establish a working relationship with the industrial and business community which will insure their interest and cooperation in providing employment opportunities.

f. To develop a continuing program of occupational follow-up for every student leaving the school, either by graduation or withdrawal, for a period of five years after termination, and to annually update this information by contact through whatever media may be available.

4. Community Involvement

a. To establish a communications program, developing techniques and media for public relations.

b. To develop and implement a planned program of visitation.

c. To develop a file of available resource persons.

d. To develop an in-service training program for resource persons who will work with teachers and pupils in the classroom.

e. To provide principals and teachers with information about the world of work.

f. To work with the PTA in developing programs for the dissemination of information.

g. To work effectively with news media.

Goals and Objectives: Houston

The Houston Independent School District has an extensive vocational education program at the secondary level, consisting of 299 vocational units in six subject areas. It also conducts exemplary programs in Environmental Technology, vocational training for persons with special needs (EMR), Occupational Orientation in the middle schools, and Occupational Awareness in grades K-6. The Occupational Awareness program, initiated in 1970, extended to 36 of the district's 170 elementary schools in the 1971-72 school year. Thus the major focus of the Houston project, as stated in its letter of assurance to the U. S. Office of Education, was to complete development of the Occupational Awareness program materials and to determine the effectiveness of such programmatic effort through a comprehensive research design, prior to expansion of the Occupational Awareness program to include all 170 elementary schools.

A second project goal was to evaluate and research the current programs through classroom observation. The objective of the observation technique was to provide management personnel with feedback data from each of the experimental schools. The following areas of concern were relevant to the kinds of information needed by the personnel implementing the program:

1. The degree of Occupational Awareness implementation at the classroom, resource center, and administrative level in each school.

2. The discovery of obstacles to Occupational Awareness's systematic implementation.

3. The attitudes, needs, and problems existing within each building.

4. Successful materials, procedures, and activities.

Other major project objectives were to provide additional guidance and counseling materials and techniques for teachers, and to add to curriculum preparation activities at the middle school level.

Project Design and Procedures

Project Design and Procedures: Fort Worth

The Fort Worth Public Schools career education project attempted to establish a model on which additional approaches, techniques, and philosophies could be built to add a stronger and more stable dimension to career education in the total instructional program of the school district. The project site included four elementary schools, two middle schools, and two high schools. Each of the schools selected was chosen on the basis of: (1) interest on the part of teachers and administrators, (2) commitment to be involved in such a study, (3) socioeconomic level (necessary in order to obtain a cross section representative of the district), and (4) indications that specific processes which had been identified for implementation could be field tested in said school. Data on the complex of schools which comprised the project site are provided in the table below:

LEVEL	NUMBER OF SCHOOLS	NUMBER OF TEACHERS	NUMBER OF COUNSELORS	NUMBER OF PUPILS
Elementary	4	60	.5	1,500
Middle School	2	107	2	2,300
High School	2	211	7	4,100
Total	8	378	9.5	7,900

Director of the project was Robert M. McAbee, Associate Assistant Superintendent for Vocational-Industrial Education in the Fort Worth Independent School District; Mr. McAbee devoted approximately fifteen percent of his time to the project. His qualifications included a master's degree in industrial education from North Texas State University, current work in a doctoral program at that institution, and industrial experience in the field of graphic arts. Other prior experience included five years as director of vocational-industrial education, three years as liaison director of adult education, five years as a consultant for Trade and Industrial Education with the Texas Education Agency, and ten years as a vocational graphic arts teacher.

Qualifications for other project staff positions had been outlined in the required letter of assurance, as follows:

1. Career Awareness Coordinator - The career awareness coordinator who will correlate the total program, kindergarten through grade twelve, will hold a master's degree, preferably in curriculum development and administration, and will have had experience as a classroom teacher and as an administrator. In addition, the CAC will have had wage-earning experience in industry.

2. Guidance Counselors - Guidance counselors to be employed will meet the qualifications established by the Texas Education Agency for a vocational counselor's certificate. The counselor working in the elementary schools will have had experience as an elementary teacher.

3. Placement Officer - The placement officer to be employed will direct the placement component of the project. This individual will have had experience as a personnel officer in either business and industry or in public services. He will hold at least a bachelor's degree.

Initially, facilitating and staff development were the prime concerns of the project. This initial period was generally recognized as a readiness period of development. Employed were a project coordinator, one counselor for the elementary component, one counselor for the middle school component, two counselors for the high school component, a coordinator for the placement component, two teachers of occupational orientation, one secretary-editor, and one secretary. (See Table 1 for list of personnel.)

Project personnel engaged in in-depth staff development and orientation activities for a period of two weeks. Strategies of the initial staff development included a review of the literature, extensive review of outside projects, presentations by the project coordinator, tours to outside projects and a review of the funded proposal for career education development. These, coupled with general facilitating activities, set a strong foundation for future project activities.

The second major development activity was to establish an in-house procedures model from which internal activities would be based. This product identified goals, objectives, processes, techniques, and staff duties and responsibilities for Phase I of the project, the Planning Phase.

After developmental tasks of the procedures model were completed, the project activities began to be reviewed in terms of planning by identified components of the project. Each staff member was linked to a component with specific duties and responsibilities for the development of that section of the project during Phase I. At times, however, various staff members served as resource personnel to others. These activities were determined by the nature and need of the developmental process. As a by-product of this arrangement, each staff member was kept abreast of the overall development activities.

The primary strategy of the project consisted of a three-pronged approach to effectively launch the implementation phase. This strategy included:

1. Development of an approach which would create an awareness and orientation on the part of each teacher, counselor, or administrator involved in the project site.

2. Development of an approach which would call for commitment of task on the part of each personnel.

3. Development of an approach which would create developmental products which could be used and tested during the implementation period.

TABLE 1:

PROJECT PERSONNEL
Fort Worth

Career Awareness Coordinator	Don R. Taylor
Placement Officer	Lloyd Carter
High School Career Counselor	Wade Hearn* C. Y. Thomas
Middle School Career Counselor	Buford Neal
Elementary School Career Counselor	Elsie Williams
Teacher, Career Opportunities Class	Leo Hageman, Jr.** Doris West***
Secretary-Editor	Martha Miller
Secretary (Placement Component)	Bonnie Winkfield

* Replaced by Calvin Pettit, June 20, 1972

** Replaced by Joan Mills, Fall, 1972

*** Employed May, 1972

In-service education became the overall approach to satisfying the awareness function. In-service education activities were staggered throughout the last twelve months of project development generally from August, 1972, through June, 1973. Activities ranged from formal in-service meetings involving the total personnel of the project site to one-to-one activities with teachers and project staff members. The major aim of this approach was to develop teacher trainers within each school who in turn would develop expertise with other teachers in the same building. This procedure was followed and, as a result, by the end of the project some seventy-five teachers in the fields of math, science, social studies, English and elementary instructional areas were developed as teacher trainers for career education. The overall development included some twenty days of full-time in-service activities and a considerable amount of "as needed" development time.

The second approach to be developed was commitment on the part of each personnel. Basically, this approach was designed to develop proper attitudes and philosophies. The key to this approach was to create an invested interest on the part of as many teachers, principals, counselors, parents and students as possible throughout the project. The logic used was that commitment is only present when a change in behavior is identified. When any individual made a positive suggestion about career education, his ideas and interest were encouraged by the project staff. As a result, considerable progress was made in obtaining voluntary participation on the part of teachers, counselors, and others.

The third approach of the primary strategy was in developmental tasks. Considerable time and funds were used to bring teacher resource committees, advisory committees (including schools and business and industry), and curriculum committees together for primary developmental tasks, particularly in terms of curriculum and initial implementation functions. Project developers thought this approach desirable in that techniques and general materials produced by coworkers for local needs would perhaps be more wisely used than would "borrowed" materials. As a result, most of the members of the teacher resource committees, advisory committees, and other developmental groups were selected from the project sites to be included in the study and development.

Chart 1 reflects the primary strategy model.

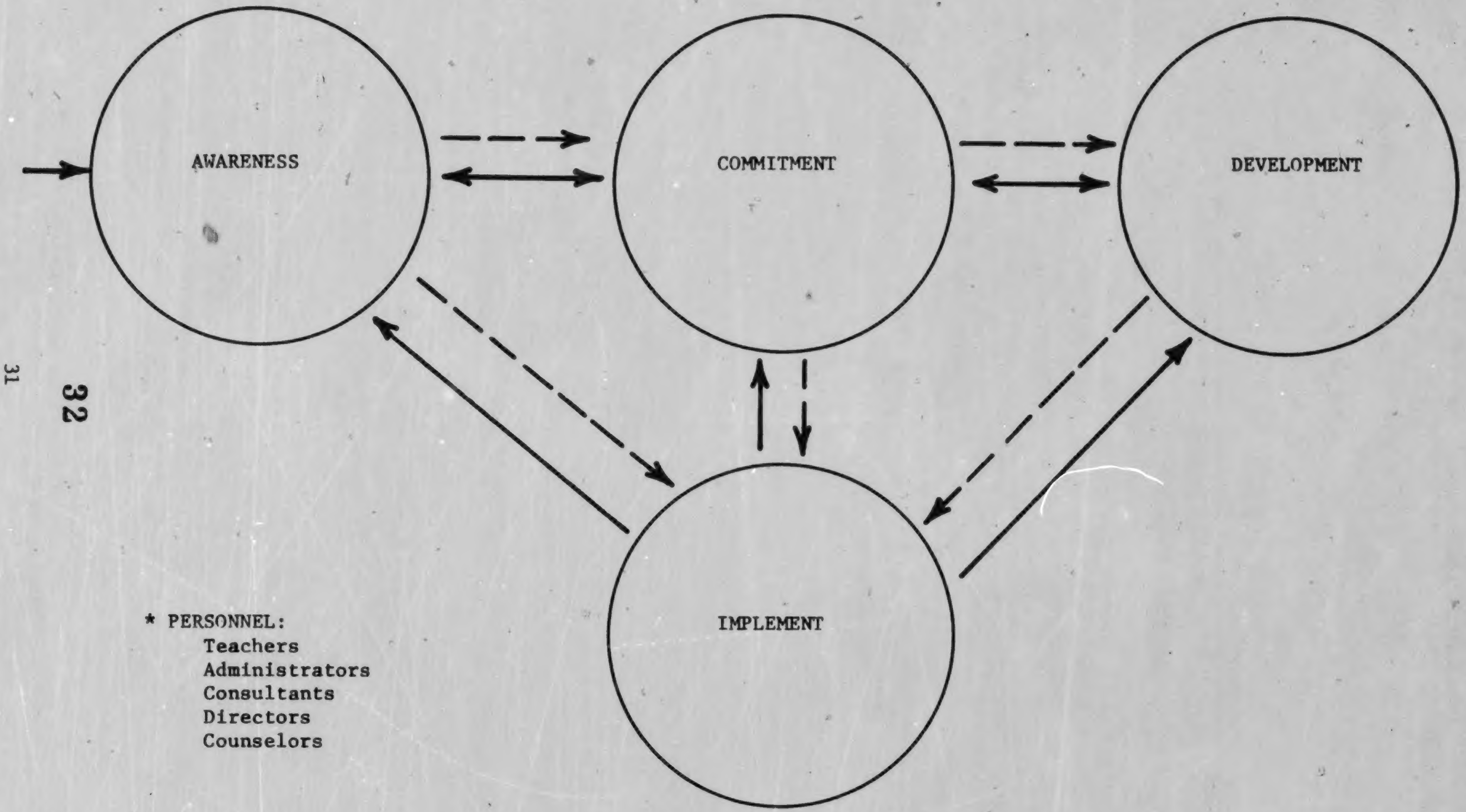
The project staff met each Friday in what was known as assessment-planning activities. One day each month was reserved for major progress reports on the status of the development functions. Throughout the project these weekly and monthly process evaluations were used to feed advisory and departmental representatives of the school district information about the direction which the project was taking. In addition, the departmental representatives contributed input as to problem areas which needed attention and other general information which proved helpful in establishing direction.

The project, through the Texas Education Agency, secured a third party evaluator. Selected for this function was the Human Resource Development Center, University of Houston. The role of the third party evaluator

PRIMARY STRATEGY MODEL

PERSONNEL* DEVELOPMENT

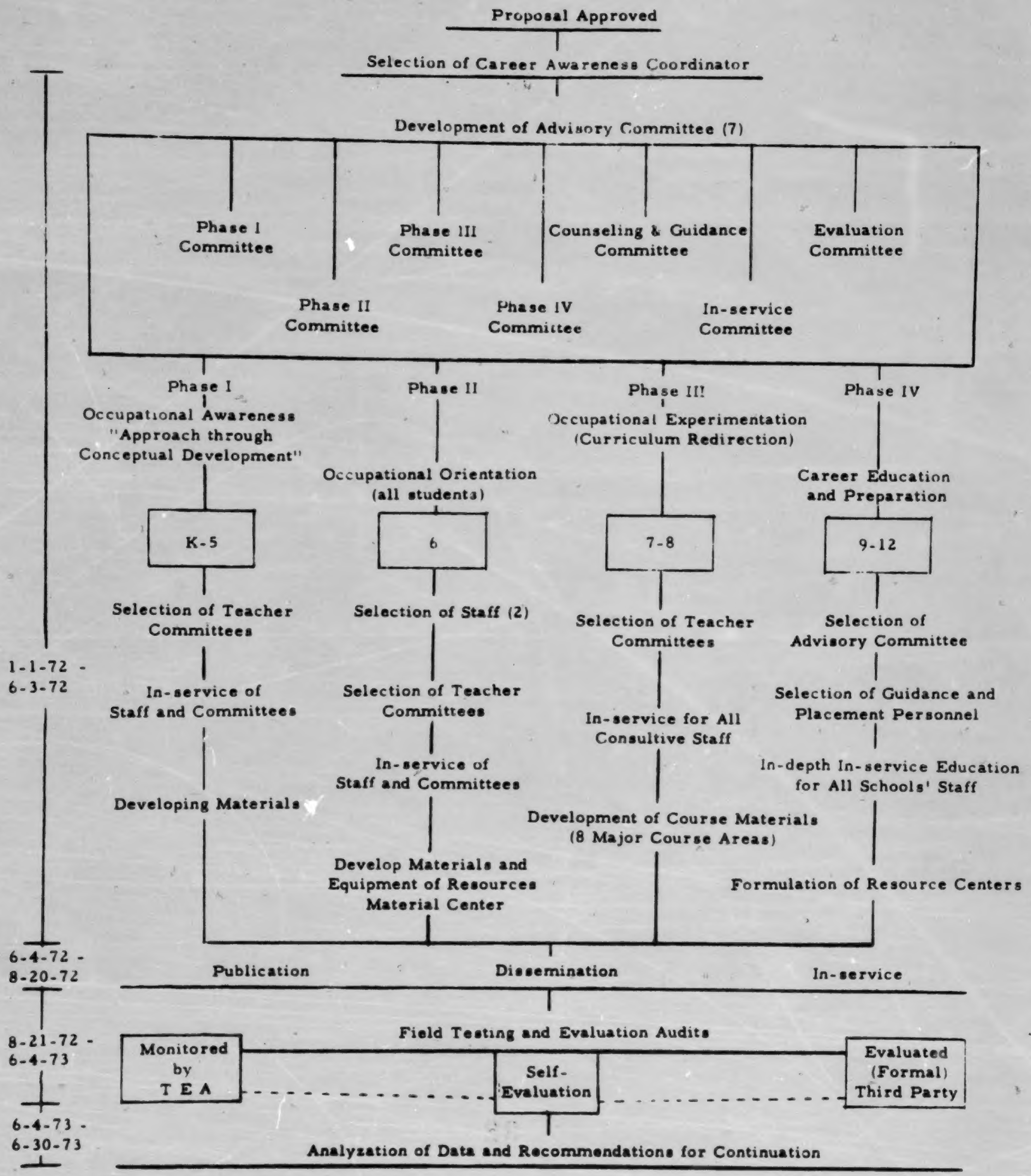
CHART NO. 1


AWARENESS
COMMITMENT
DEVELOPMENT
IMPLEMENT

* PERSONNEL:
  Teachers
  Administrators
  Consultants
  Directors
  Counselors

PROGRAM PLANNING CHART

CHART NO. 2


Proposal Approved
Selection of Career Awareness Coordinator
Development of Advisory Committee (7)
Phase I Committee
Phase III Committee
Counseling & Guidance Committee
Evaluation Committee
Phase II Committee
Phase IV Committee
In-service Committee
Phase I
Occupational Awareness "Approach through Conceptual Development"
K-5
Selection of Teacher Committees
In-service of Staff and Committees
Developing Materials
Phase II
Occupational Orientation (all students)
6
Selection of Staff (2)
Selection of Teacher Committees
In-service of Staff and Committees
Develop Materials and Equipment of Resources Material Center
Phase III
Occupational Experimentation (Curriculum Redirection)
7-8
Selection of Teacher Committees
In-service for All Consultive Staff
Development of Course Materials (8 Major Course Areas)
Phase IV
Career Education and Preparation
9-12
Selection of Advisory Committee
Selection of Guidance and Placement Personnel
In-depth In-service Education for All Schools' Staff
Formulation of Resource Centers
1-1-72 - 6-3-72
6-4-72 - 8-20-72
Publication
Dissemination
In-service
8-21-72 - 6-4-73
Field Testing and Evaluation Audits
Monitored by T E A
Self-Evaluation
Evaluated (Formal) Third Party
6-4-73 - 6-30-73
Analyzation of Data and Recommendations for Continuation

was to determine through formal means the overall effectiveness of the project in terms of what was stated in the original proposal. The Texas Education Agency's Division of Occupational Research and Development of the Department of Occupational Education and Technology monitored the project study. The local district was responsible for ongoing informal self-evaluation. In addition, the district made an interim evaluation in January, 1973; the purpose of this study was to determine if the project was progressing in a satisfactory manner.

Chart 2 illustrates the major events of the project from inception to completion.

The methods, techniques, materials, and other areas unique to each component are described below:

Elementary School Component

To accomplish in part the established objectives, the social studies curriculum guides, grades K-5, were searched to determine the need for career education in the elementary grades. The study revealed: (1) the primary grades were developing an awareness to the world of work with community helpers, although the emphasis was placed on services and products; (2) very little was being taught in the intermediate grades; and (3) there was no carry over from grade to grade. It was concluded from this study that career education needed to be built on a conceptual base.

The staff met with the principals of the four elementary pilot schools. At these meetings eleven teachers were selected to serve as a resource committee and curriculum writers. The teachers were released from their duties to attend a five-day workshop to orient them to the philosophy of and need for career education. At this time, five major teacher objectives were identified:

1. To help pupils develop a positive self-image.
2. To help pupils become aware that many variables affect career choice.
3. To help pupils become aware of the world of work.
4. To help pupils become aware that school helps prepare for the future.
5. To help pupils become aware that adaptation to environment is necessary and affects career choices.

Concepts were developed under each objective. Beginning in kindergarten, concepts were developed on the pupils' level of understanding, and in each succeeding grade the same concepts were expanded and additional concepts added, to insure that the basic concepts were soundly developed as the students progressed through school.

The eleven teachers worked with the elementary counselor, under the direction of the project coordinator, in writing an elementary curriculum guide. The ultimate goal was to make career education an integral part of the total curriculum. Since time was important, emphasis was placed on social studies. The curriculum guide was correlated with the social studies text, The Social Sciences, by Harcourt and Brace. The text is built on a conceptual scheme and lends itself well to career education. Each lesson in the curriculum guide includes a social studies concept, a career awareness concept, several activities, available resources and an evaluation. The staff worked closely with the curriculum department during the writing period.

During the summer plans were made and businesses were contacted for several activities to involve all pupils in each of the four schools. A career awareness mini-resource center was established in each school, consisting of filmstrips, recordings, pictures, puppets, books, puzzles, and games. Library materials related to career awareness were collected in two schools for a career awareness corner.

Work with individual teachers continued throughout the year. Classroom demonstrations, suggestions as to ways of utilizing resource materials, a bulletin board booklet compiled according to objectives, provision of resource speakers, and arrangement of study tours were some of the ways teachers were aided in the implementation of career concepts. By the end of the year, eighty percent or more of the teachers were involved in some way. A survey was made in November to determine teacher involvement and the use of resource materials. According to this survey, 98 percent of the teachers were using the materials in the resource center. At the time the survey was made, some teachers were reluctant to try anything new or different, but as they observed the enthusiasm of other teachers and pupils, many who were at first unwilling to try new approaches became involved in teaching career education.

Pupils gained an awareness of many occupations and respect for the individual worker through participation in numerous study tours. In the four pilot schools, a total of 140 classes went to 29 different sites. Ninety-seven resource speakers spoke to 340 classes; many of the speakers were parents in the community. A questionnaire concerning career awareness was sent to the parents in each community. The response in the middle class communities was very good, although in the lower economic neighborhoods very few questionnaires were returned. This low response may have been due to the fact that these parents' jobs would not allow them to be available during school hours; furthermore, in many instances, the children were from broken homes and supported by welfare.

The staff of the four pilot schools met twice during the year for two-day in-service meetings. The in-service was planned and conducted by the staff and resource teachers. In the spring an in-depth training program was conducted to orient teachers to the philosophy, the needs, and the approaches of career education.

Community involvement included staff presentations of career awareness information to elementary faculties, sorority groups, college classes and P.T.A. groups.

Middle School Component

One of the first developmental tasks of the middle school component was to establish a pilot course in Career Opportunities for students in the sixth, seventh and eighth grade levels. The project staff personnel responsible for the development of this phase were two teachers employed early in the project for planning, and the career counselor. The course planners attempted to supply within the curriculum necessary information and skills for students to make rational decisions about careers at various stages in the students' educational development. The course included the following study areas:

1. Self-awareness - Students gained understanding about themselves regarding personal interests, aptitudes, skills, and past achievements and how these relate to jobs.
2. Occupational information - Job families or clusters were introduced and the students developed skills in using various types of occupational information through research into several jobs of their own choosing. This phase was supplemented with study tours and resource speakers.
3. Work concepts - Job attitudes and good work habits were examined in various ways through discussion, games and role-playing. The students studied basic economic and technological effects on the world of work.
4. Beginnings - In this area students were encouraged to make a tentative career choice and to make educational plans for reaching this goal. Included here was information about job interviews, applications, social security cards, employment agencies and placement services, as well as possibilities for post-secondary training.

The Career Opportunities classes were organized on a different basis in each school, as indicated in the data below:

Schools	Students	Grade Placement	Class Schedule
William James	165	6th	Met once each day for one quarter only.
Leonard	364	7th-8th	Met two days each week for entire school year.

The sixty-day quarter limited the course in some ways, but proved satisfactory. Scheduling classes for only two days each week created some continuity problems and made interest harder to maintain.

The research aspects of the courses were appealing initially, but became boring to some students because of routine. New ways need to be implemented of making the investigation of a cluster exciting and meaningful.

Twenty-two or more resource speakers were used in the Career Opportunities classes at the two schools. Other classes had some resource speakers but actual numbers are not available. The speakers were briefed to some extent and their presentations were generally effective. Students asked numerous questions that proved helpful in eliciting job information. Resource speakers also provided an important tie to community resources, and served somewhat as an information channel back to the community.

Study tours were effective means of introducing students to the world of work. They were sometimes difficult to arrange because of time limitations, transportation problems, and the size of the groups. The Career Opportunities classes at William James had a total of 56 study tours to fifteen different sites. The tour sites were chosen to be representative of the major career clusters.

Students observed workers in the following areas:

1. Food processing and handling, clothing manufacturing, communications, including telephone, radio, television and book publishing;

2. Public service, presented by a trip to the post office; hospitality occupations by visits to a major motel and a major restaurant in the area;

3. Manufacturing in heavy industry represented by an auto manufacturing plant;

4. Marketing and distribution occupations represented by a lengthy tour through the catalog and retail sections of a major department store;

5. Health occupations viewed on one hospital tour;

6. Small independent businesses showing workers in auto body work and upholstery trades.

At appropriate places on the tours the office and clerical occupations were emphasized. Students at Leonard Middle School observed some construction occupations while touring the Dallas-Fort Worth Regional Airport under construction.

Overall the course had as its basic foundation guidance and counseling responsibilities for each teacher and project staff member.

The second major approach was to assist classroom teachers to place greater emphasis on giving occupational orientation to their subject matter. To do this, an initial in-service training session was conducted to acquaint teachers with the needs and goals of the program and the roles teachers were expected to play in it. Counseling with individual teachers and principals to stimulate their involvement and innovation continued throughout the year. Initially, many teachers appeared indifferent to the project's goals and reluctant to interweave career concepts with their academic areas. However, with guidance and continued in-service training, these teachers began to develop a deeper understanding of the program and to accept it with greater enthusiasm.

Materials, filmstrips, films, resource speakers, and even lesson plans were suggested to department or team leaders and individual teachers during the year. An intense eight-day in-service training program was conducted to assist teachers in understanding the program and in making plans for relating their course to the world of work.

The third approach was to provide a resource center as a satellite to the library for use by teachers and students in investigation and exploration of careers. An extensive search of career materials was conducted to identify the types and levels of materials needed. A large number of sound filmstrips, booklets, tapes, attitude and informational posters, career kits and games were purchased. An annotated bibliography of the materials was prepared and given to each teacher. Plans for maximum use of the centers were made and implemented with the following results:

School	Teachers Served	Students in School	Students Signing into Lab
Leonard	55	1,200	4,500 (est.)
William James	52	1,125	680

At Leonard, which has modular scheduling, students had free time each week and would spend fifteen minutes or more in the lab without restriction. Students at William James had no free time and were released from classes to use the resource center; they worked in the lab with an aide for the full hour. The aide was available for 34 days only, which also limited the number of students using the center. Some teachers borrowed materials for use in their class instruction.

The instructional materials, filmstrips, and audiovisual equipment proved adequate. However, filmstrip titles should be expanded as more appropriate ones become available. Equipment may become inadequate as more teachers become involved in the program. Ways must be found to insure maximum use of the center by teachers and pupils in the traditionally scheduled school.

The fourth approach was to inform parents of career education goals and concepts. Parent contact was limited in the implementation stage. Parental understanding of the middle school program was limited to any discussions they may have had with their children in the Career Opportunities class and contacts with teachers at school functions. The principal at each school was primarily responsible for this function.

During the spring Open House at Leonard Middle School, over one hundred parents came by the Career Resource Center and the Career Opportunities classroom. Their discussions regarding the goals and purposes of career education could be described as positive, encouraging, and cooperative.

The fifth approach was to seek the support of business and industry. The middle school component's contacts with the business and industrial community were informal and limited to requests for resource speakers and study tours. Each contact involved a brief explanation of career education goals and objectives and the need for their support and participation. All groups voiced a high interest in the potential of the program.

High School Component

A number of approaches were developed to meet the goals and objectives of the high school component. The first approach was the establishment of a career resource center to be located in each of the two high schools in the project. The purpose of the resource center at the high school level was to establish a centralized location where widely diversified kinds of pamphlets, slides, tapes, films, books, career information kits, and reference materials pertaining to occupational information could be utilized by students through (1) small group activities, (2) individual activities, (3) research projects, and (4) general occupational interest surveys. The materials in the center were also available to every teacher within each building to be used in general classroom instructional activities.

The following chart depicts the usage of the center in terms of numbers of individual contacts throughout the implementation phase:

Resource Center Utilization

	Technical High School	Arlington Heights
Students	5,269	5,819
Teachers	201	308
Administrators	52	174
Community Members	35	130
Job Applications	427	448
Group Involvement	165	112

In addition to the general activities taking place within the resource center facilities, mini-courses in "Career Opportunities" were developed in each school. In one school, four five-day orientation programs were developed for senior students. Students were released from their normal schedules one hour each day for the five days and were involved in activities relating to: (1) job interviews, (2) job attitudes, (3) what to know before going to work, (4) getting and keeping the first job, and (5) how to fill out job applications. Community resource speakers were used to help conduct the mini-course activities.

At the other high school, two fifteen-day mini-courses were developed for students in Career Opportunities within the technical fields. For eighty minutes each day students were involved in varied activities leading to a greater awareness of the wide range of opportunities within the technical fields. A total of 235 students were involved in the mini-courses in both schools.

The second approach was the involvement of classroom teachers in the project; an objective of at least fifty percent participation was set. This objective was accomplished through the following procedures: (1) in-service meetings pertaining to career education at the high school level; (2) development of teacher trainers as model teachers representing different subject matter areas; (3) development of mini-courses; (4) assistance with study tours; (5) assistance in securing resource speakers; and (6) staff resource assistance on an individual teacher basis.

The third approach was the development of an advisory committee at each school composed of teachers, counselors, principals, and business and industrial representatives. Meetings were conducted through the project on an as-needed basis. The committee provided input and suggestions for the various strategies used by the high school component.

The fourth approach was to develop an in-depth occupational counseling program to work in conjunction with ongoing counseling activities. The first year's focus was to develop approaches for the ninth grade student so that, beginning in grade ten, he might select courses on the basis of his occupational interests and abilities. General procedures followed in this approach were: (1) meetings with classes to discuss career opportunities and available in-school training programs; (2) administration to classes of an informal student occupational interest survey; (3) individual and group counseling according to areas of interest; (4) administration of the Kuder Preference Survey and the G. A. T. B.; and (5) individual and group visitations to observe occupational training programs in operation.

The fifth approach was the development of a strong linkage to the placement component.

The effectiveness of the career education program depended upon the involvement of all school personnel as well as resource speakers and community resources. The career guidance counselor was identified as a major resource person in each school. His basic duties were:

1. Teacher assistance - The Career Guidance Counselor helped teachers in any way possible to relate their subjects to the world of work. Mini-courses, literature, aid with study tours, speakers, and other means were used to accomplish this goal. Teachers, counselors, and other staff members and resource persons were provided presentations of special career activities, such as a career day program.

2. Group counseling - One purpose of group counseling was to orient students to occupational information. This was done through the cooperation of the regular counselors and/or subject teachers. Group testing was scheduled in this same manner with emphasis on occupational information.

3. Job cluster information - To expose students to a broad range of occupations within a major cluster, the career

counselor worked with small groups and/or individuals, using audiovisual aids, career packets, pamphlets, and other instructional materials.

5. Individual counseling - The career counselor met with individual students to help them understand the advantages and disadvantages of the occupation they were considering. This gave the student an opportunity to determine whether he was preparing himself for his chosen field.

6. Aid to teachers in acquiring resource speakers - Some teachers knew individuals they wanted to involve as resource persons. Others depended upon the services of the career counselor to secure their speakers. Materials were available for students to evaluate the speakers if the teachers so desired, and this information was used in acquiring future speakers.

7. Means of evaluating resource center materials - This was done by inserting a card on the front cover of materials so that the records could be kept.

8. Coordination with placement officer - The responsibility of the career counselor was to interview those students who might be interested in pursuing full-time employment during one of the quarters or part-time employment during the school year. Those students selected had an opportunity to be interviewed by employers supplied by the placement officer. If a student were hired, the placement officer maintained contact with him and his employer until the student was actually placed.

9. Liaison with employers, community agencies, and organizations - The career counselor worked with and engaged in civic and community programs to further the important function of informing the public regarding career education and job placement. Parent involvement was obtained to emphasize and publicize the career education program, "What It Is and Why It Is Needed."

10. Evaluation and follow-up of counseling activities - In order to determine the effectiveness of methods used in career counseling, the counselor conducted follow-up interviews and administered questionnaires. Students also demonstrated interest in specified career fields by further questioning or independent research in related areas.

Career guidance resource rooms were developed to expose students to all facets of an occupation--not only to the heroic and glamorous side of a career or professions, but also to the other side that shows the sacrifices and real hardships that are demanded and frequently must be endured to be successful.

Placement Component

The Fort Worth Public Schools implemented the Placement and Follow-up procedures as a part of the Career Education Project, K-12, in the 1972-73 school year. Much time was spent with administrators, teachers, counselors, and business community to initiate an attitude of acceptance for the placement and follow-up component.

The placement component in the high school project study served as an extension of the guidance and counseling component. It aided in bringing together employers and students who were seeking employment. Students who planned to further their education after graduation were assisted in selecting a vocational school or a college of their choice. The placement service worked in cooperation with the guidance counselors, cooperative education teacher-coordinators, vocational teachers, Chamber of Commerce, Texas Employment Commission and other civic and private agencies.

A survey was conducted to determine potential employers for students who wished to work part-time while continuing in school, for students who withdrew from school and worked full-time and for students who graduated from grade twelve and desired employment.

A comprehensive file was maintained on current job opportunities for part-time and full-time employment. The placement service made an extensive effort to insure that the highest possible percentage of students who graduated from grade twelve were placed either in a job or in further education.

The placement service functioned through the 1972-73 academic year. All components of the project were designed to emphasize reliable measurement of student outcomes in relation to the treatments attempted and to provide for appropriate program revisions where there were needed changes.

Arlington Heights and Green B. Trimble Technical High Schools were selected as the pilot schools to establish the placement services. Each of these schools was staffed with one principal, three vice-principals, a total of seven counselors, 211 teachers and 4,100 students, with five graduating periods in the two schools for the school year 1972-73.

Following is a description of the placement component's activities:

1. Services provided students who planned to attend college

   It seemed that most all school personnel, especially the school counselors, had done an adequate job in counseling college-bound students for college entrance. However, there appeared to be a void in the amount of material available to the school counselor to aid the student in research needed in many instances to help the student in career decision-making. With the additional material and media in the resource center the career education counselor was able to assist students through the use of filmstrips, tapes, job packets, and other materials to better inform students about many careers. The career education counselors assisted school guidance counselors and together counseled 465 (estimated) students who planned to attend college.

2. Services provided students interested in post-secondary training less than a baccalaureate program

   The career resource center was created, with both teachers and students in mind, to provide a variety of instructional materials and media relating to occupations of all kinds. Teachers and counselors attended in-service training sessions prior to the opening day of school informing them of the availability of the resource center and encouraging them to take advantage of the materials to enrich their teaching and help students to understand how their subjects prepare them for the world of work.

   A full-time career counselor was assigned to each of the career resource centers for the school year. Subject teachers and the career counselors coordinated their planning in reaching the needs and interests of students in a classroom setting and/or in the career resource center. Small groups of students as well as individuals, were encouraged to drop in during the day for individual counseling and to research material pertaining to the occupation of their choice. The career counselors made a total of 11,088 pupil contacts throughout the school year. It is obvious that many students came to the center several times which indicates a high interest on the part of the students. Of the number mentioned above, 88 students were counseled for jobs requiring training in vocational schools.

3. Services provided students interested in employment

   A. Preparation of seniors seeking employment

      All school personnel were urged to contribute to the preparation of seniors who were seeking employment after graduation. Working with the teaching staff were the career counselor and placement coordinator. Seniors seeking employment were counseled early in each quarter by the career counselor on filling out job applications, personal interviews, employer-employee relationships, and job attitudes. Approximately four or five weeks prior to each graduating period, all seniors interested in the placement services were assembled in the school auditorium for further counseling and filling out of job application forms. After screening the application forms as to the types and number of job slots needed, the career counselor, placement coordinator, and in many instances, the vocational instructors shared the responsibility of further counseling for job referrals. As job slots were made available the student was given a referral card for identification as he approached the business or industry for his interview. After the interview the placement center was notified by the student and/or business if the applicant was employed or deferred.

There were 472 graduates who requested help in finding employment. Of this number 392 were referred to business and/or industry for personal interviews. Participating companies employed 361 graduates either as full-time or part-time employees. Thirty-one (31) were deferred and returned for further counseling and placement at a later time.

B. Services provided school drop-outs

Extensive interest was given to the problem of drop-outs in the two schools. The placement center anticipated helping drop-outs in further training or placement in a full-time job after leaving school; however, the outcome was not as bright as was expected. There were 396 students who withdrew from school before completing graduation requirements. This number did not include those students who moved from the city or transferred to other schools within the school system. The ages of the drop-outs ranged from 15 to 19 years old and included all four grades in high school. Of the 396 students who withdrew from school, only 35 were referred to the placement services for job counseling or out of school training programs. An assessment of drop-outs revealed that most students who dropped out of school did not return to school to formally withdraw, but merely quit attending classes. Job interviews were made available to twenty-six (26) of the drop-outs and eleven (11) were placed in a job. Further assessment revealed that many students who were not successful in school were not reliable or successful on the job. Drop-outs are limited in the types of employment that are available to them because of their ages. Unless the student is 18 years old he/she is usually limited to food services, grocery stores and housekeeping type jobs. Other students who withdrew from school could have been placed in full-time employment if they had been willing to conform to the company dress codes.

C. Services provided students enrolled in the school related work programs (D.E., I.C.T., V.O.E., H.E.C., H.O., and N.Y.C.)

The SRW programs began the school year with an enrollment of 347 students in the two schools and ended the year with an enrollment of 221 students. The drop in enrollment in the SRW classes seems to be due to two factors: (1) the quarter system, which made it possible for students to transfer to other classes or to graduate early in the school year, (2) the cut off of the N.Y.C. program in April that had an enrollment of 25 students. At the conclusion of the school year 90 of the graduating seniors in the SRW program remained on the same job for which they were being trained throughout the school year.

The coordinators in the SRW program cooperated with the placement coordinator, sharing job slots throughout the school year. Fifty-six part-time job slots were referred to the SRW coordinators and full-time job slots were referred to the placement center by the coordinators.

D. Non-School Work Program

Three surveys were performed during the school year to determine the number of students working part-time, twelve hours or more per week. The first survey showed that 545 students had secured jobs after school hours and the survey at the close of the school year revealed that 454 students were employed part-time after school.

E. Services provided students who were in school and requested part-time employment

In the beginning of the school year plans were made to assist any student who wanted a part-time job, but because of the time involved in filling out job applications, counseling and the limited number of part-time jobs available after school hours it was decided that this service should be limited to hardship cases only. Twelve students who were determined to be hardship cases were counseled and placed in part-time employment after school.

F. Job development for graduates

One of the major responsibilities of the placement coordinator was to provide job openings for seniors at each graduating period. This was accomplished by visiting with employers throughout the Fort Worth industrial area. Through these visits 138 businesses and industries agreed to participate in the placement services. A comprehensive file was maintained on each company to be used in making contacts prior to the end of each quarter. Another dissemination activity was the provision of programs for Fort Worth area clubs and organizations in the Fort Worth area.

Ten programs were presented to such clubs informing them of the career education project and the placement services available to them as project and the placement services available to them as businessmen. From these contacts more than 265 job slots were made available for graduating seniors. These disseminating activities were ongoing.

4. Advisory Committees

Prior to the implementation phase of the placement component it was determined that outside assistance was needed to complete the placement program developmental efforts. It was deemed necessary that businesses and industries should be involved in an advisory capacity to aid the placement center in keeping up with the pulse of industry, projecting its employee needs, and providing job slots for the graduates. The advisory committee was active in this capacity with the placement coordinator during the school year. The committee was composed of two business and industrial representatives, one representative from the Texas Employment Commission and one representative from the Mayor's Council on Youth Opportunity.

5. Follow-up

A student career survey instrument was developed in the planning phase to be used in surveying the graduating seniors prior to each graduating period. The front side of this instrument was used to glean information, such as:

...Are you planning to enter college?

...Are you planning to enter post-secondary training less than a baccalaureate degree?

...What career do you plan to pursue?

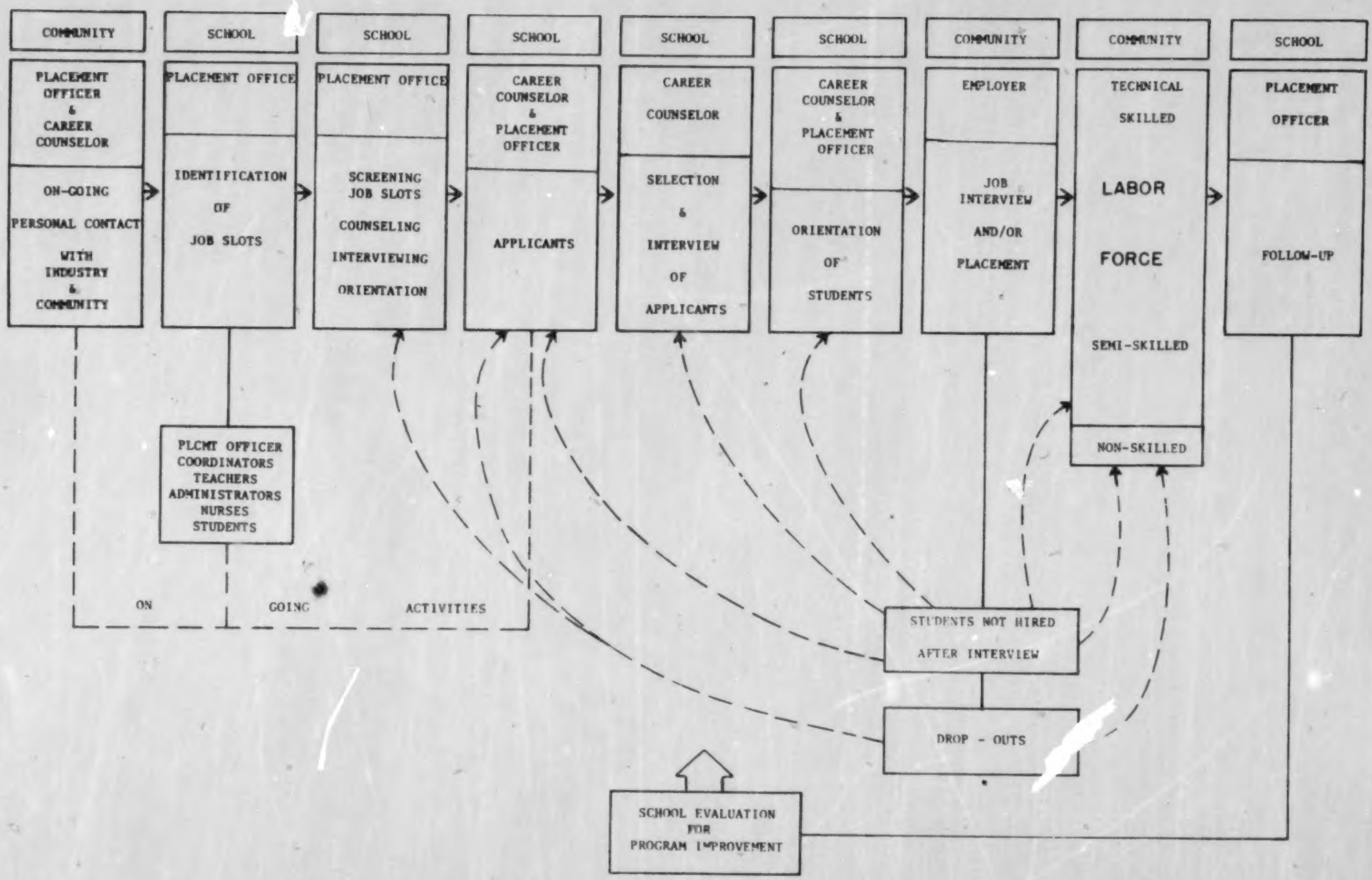
...Which subject, if any, influenced you in choosing your career?

Other general information was requested to aid in follow-up in succeeding years. The back side of the instrument was developed to record follow-up information on the students' educational, employment and military records.

The first survey was taken three weeks prior to the close of the 1971-72 school year and successive surveys were taken during the 1972-73 school year. All successive surveys were performed three weeks prior to each graduating period to determine the variables, if any, when given at the same time before each graduation period.

PLACEMENT SYSTEM

CHART NO. 3


COMMUNITY
PLACEMENT OFFICER & CAREER COUNSELOR
ON-GOING PERSONAL CONTACT WITH INDUSTRY & COMMUNITY
SCHOOL
PLACEMENT OFFICE
IDENTIFICATION OF JOB SLOTS
SCHOOL
PLACEMENT OFFICE
SCREENING JOB SLOTS COUNSELING INTERVIEWING ORIENTATION
SCHOOL
CAREER COUNSELOR & PLACEMENT OFFICER
APPLICANTS
SCHOOL
CAREER COUNSELOR
SELECTION & INTERVIEW OF APPLICANTS
SCHOOL
CAREER COUNSELOR & PLACEMENT OFFICER
ORIENTATION OF STUDENTS
COMMUNITY
EMPLOYER
JOB INTERVIEW AND/OR PLACEMENT
COMMUNITY
TECHNICAL
SKILLED
LABOR
FORCE
SEMI-SKILLED
NON-SKILLED
SCHOOL
PLACEMENT OFFICER
FOLLOW-UP
PLCMT OFFICER
COORDINATORS
TEACHERS
ADMINISTRATORS
NURSES
STUDENTS
ON
GOING
ACTIVITIES
STUDENTS NOT HIRED AFTER INTERVIEW
DROP - OUTS
SCHOOL EVALUATION FOR PROGRAM IMPROVEMENT

Since the survey was conducted approximately three weeks before the end of each graduating period in both school year 1971-72 and 1972-73, it is assumed that the results were valid in relation to the students' expressed interest and knowledge of career direction immediately prior to graduation.

Chart No. 3 depicts the overall systems approach to the pilot placement service design developed through the project study.

Project Design and Procedures: Harlandale

The Harlandale Independent School District is located in the city of San Antonio. It consists of two high schools, four middle schools, fifteen elementary schools and one vocational-technical school for special education students. Of a total of 18,514 students, 67 percent are Spanish surnamed, 32.8 percent are Anglo-American, and .2 percent are Black American.

The Harlandale career education project was divided into four components: (1) research and development, (2) guidance and counseling, (3) job placement and follow-up, and (4) community involvement. The research and development and community involvement components operated at all grade levels, K-12. The guidance and counseling component operated at the elementary and middle school level, and the placement and follow-up component was active at the high school level.

Project director was Lucylle V. Deasey, a licensed and certified psychologist with a bachelor of science degree in education and a master's degree in counseling and guidance. Ms. Deasey's experience included eighteen years of teaching, fifteen years of counseling, and business experience in sales and management in an auto parts business. Prior to initiation of the career education project, she was Occupational Orientation Coordinator in the Harlandale Independent School District. She devoted one hundred percent of her time to the project.

Research and Development Component

Staffing of the research and development component was delayed due to the fact that the program began midway in the school year, and due to problems in recruiting qualified members of the writing team. Qualifications for the task force writers were outlined in the letter of assurance; writers were to have: (1) a valid Texas teaching certificate, (2) at least two years of teaching experience, (3) the recommendation of a principal or instructional supervisor, (4) demonstrated outstanding teaching performance, (5) demonstrated competence in creativity, innovative ability, and communicative skill, and (6) dedication to the philosophy of career development.

TABLE 2!

POPULATION
Harlandale

S[illegible]nts		18,514
Regular students	17,393	
Special education students	571	
Kindergarten students	550	
Teachers		544
Counselors		22
Elementary guidance coordinator (district)	1	
Elementary guidance counselors	4	
Middle school counselors (district)	4	
Middle school counselors (project)	4	
High school counselors (district)	7	
High school vocational counselors (district)	2	

Two writers in the areas of secondary mathematics and secondary English, were hired in March, 1972. The remaining two writers in secondary social studies and secondary science began working in June, after the end of the regular school session. No full-time elementary writers were included in the proposal.

A number of conferences, involving the project director, curriculum director, vocational director, and writers, resulted in the decision not only to research and develop career education materials but also to develop new curriculum guides in the four subject areas of English, mathematics, social studies, and science. These guides would follow a general format agreed upon by this group and would use the Texas Education Agency guidelines for curriculum concepts in each of the areas. The performance objective mode of presentation was to be followed. The design of the guides was to be such that the career concept would grow naturally from the basic curriculum concept, so that there would be no interruption in instruction; rather, the career concept would support and reinforce the basic instructional concept.

Elementary guides were begun by a team of elementary teachers working during the summer months of 1972. They plotted course outlines and materials for grades kindergarten through six, in the four areas outlined. During this time they compiled a resource book for elementary teachers at all grade levels.

Since there was insufficient time during the summer months for this group of elementary teachers to complete their work, the task of completing the guides fell to the secondary writers, who did the final rewriting for kindergarten and first grade guides. In February, 1973, an additional elementary writer began making revisions on guides for grades two through six. In March, a second writer was hired to assist in this task by inserting a bilingual career information column in each guide.

Guides for grades kindergarten through grade four were completed during the project period including bilingual career education data and materials. An outline for use in completing the fifth grade guide was also made.

In the elementary guides, emphasis was upon the development of an "awareness" of as many fields of work as possible; this task was simplified by students' introduction to the fifteen occupational clusters. During this awareness phase, students were also taught that they have a choice as to future employment.

Secondary teachers were asked for advice and assistance whenever possible. They assisted in formulating basic curriculum concepts for each course covered by a career education guide, and they contributed to the writing of suggested teaching methods for each concept. Program funding allowed payments of five dollars per hour for their work.

The following secondary level guides were completed: sixth, seventh, and eighth grade mathematics, Fundamentals of Mathematics I and II, Algebra I and II, geometry, and math of consumer economics; general physical science, eighth grade earth and life science, Biology I and II, chemistry, and physics; seventh grade reading and composition, seventh, eighth, and ninth grade English; Texas history and geography for the seventh grade, American history to 1865, American history after 1865, world history studies, economics, sociology, Mexican-American studies, Latin-American studies, advanced social studies problems, advanced Texas studies, American government, and world geography studies. As each guide was completed, workshops were held with teachers who were to use that guide.

The thrust of the secondary guides was two pronged. Guides for middle school teachers sought to foster "exploration" of students' career interests which had been nurtured during the awareness phase, to narrow somewhat their areas of career interest for example, from all fifteen occupational clusters to perhaps three. The guides contained information permitting a deeper penetration into a smaller number of careers; they also encouraged teachers to allow students to explore career areas of personal choice through such exercise as library research, book reports, and compositions. Guides on the high school level engineered an even further narrowing down of student interests, so that the student might delve deeply into a single career interest during the "investigation" stage of career education. Ideally, this "investigation" would lead a student into gainful, self-satisfying employment immediately upon graduation from high school, or successful entrance into college, or acceptance into post-secondary vocational training, or a combination of these.

In addition to writing duties, the research consultants visited other school districts to conduct workshops. Workshops were held in the Brownwood, San Angelo, Sonora, Boerne, and Burnet Independent School Districts. Additional training sessions were held at the USOE regional meeting at the Region XX Education Service Center in Dallas, and at a workshop conducted by Region XIII Education Service Center in Austin.

Materials were developed for use in workshops and other in-service situations. A set of polarized transparencies depicting the structure and duties of the program, plans for initiating career education programs, brochures explaining each of the four components, excerpts from the career education guides, and bibliographies of career education materials assisted the consultants in making effective career education presentations.

The writers also spoke, often after regular working hours, at PTA assemblies, community presentations, school board meetings, and college classes to emphasize the goals of the program and its importance to the educational and business community, and to define the roles to be played by school personnel, businessmen, and the local community.

An important task of the research and development staff was to find and accumulate occupational data. Small professional libraries were established in the Career Education Center to assist consultants in the creation of career portions of guides, including such source materials as the Occupational Outlook Handbook, SRA Occupational Exploration Kit, and Dictionary of Occupational Titles. Many free materials were garnered by means of letters sent to local, state, and national organizations, unions, and other career-related agencies. These materials served as aids to the consultants and were often used by teachers.

Project funds were used, where permissible, to purchase career-oriented audiovisual materials such as filmstrips, recordings, and 16 mm films for the school district's audiovisual department. When relevant to a particular career concept, these materials were incorporated into the curriculum guides. Each middle and high school library was provided with various career books. Sets of career volumes with elementary appeal were also purchased, to be placed on the mobile libraries serving the district's elementary schools.

Counseling and Guidance Component

Eight counselors were hired to staff this component; four were assigned to the elementary schools and four to middle schools. At the elementary level, on an itinerant basis, three counselors each served four schools and one counselor worked with three schools. At the middle school level, each school had a full-time counselor. The middle school counselors were thus able to become a definite part of the school faculty and to become more familiar with the student body than were elementary counselors. They also worked with the regularly assigned counselor in many activities.

All the counselors were committed to the development of information which would help the student to learn as much as possible about himself, his interests and aptitudes, as well as about the job opportunities which might be available to him. Counselors held in-service workshops and coffees with school faculty in order to acquaint them with career materials and curriculum guides. The counselors also arranged for field trips, resource speakers, and parent participation in career education activities. Parents were invited to address their children's classes and describe their occupations. Essay contests were held, with career choices as the assigned topic; students were encouraged to investigate occupations other then the most familiar ones such as doctor and teacher. Poster contests were also held at the elementary level.

Open house programs were held to familiarize parents with the project's activities. Skits about the world of work were created by the various schools and presented to the school board, at PTA meetings, and to the clergy.

Counselors worked with teachers individually and in groups concerning the use of the career curriculum guides. They selected commercial materials which were used extensively throughout the school. Libraries were created in schools where room was available. In the middle schools and high schools, career materials were placed in both the library and the counselor's office. Although the high school counselors were not funded through this program, they served as a liaison between the high schools and the career education project. Many activities were carried out at the high school level in the form of assemblies, resource speakers, and special presentations to clubs and interested teachers.

Materials were developed for the counselor's use in the area of decision-making. Letters to parents, in both English and Spanish, were written and brochures disseminated at meetings of various kinds. Character development was stressed particularly at the elementary level, with materials supplied by the Character Education Project associated with the Northeast Independent School District.

Counselors also met with students, individually and in groups, and assisted in test administration and the interpretation of various tests and surveys, including the project-developed survey instrument.

Job Placement and Follow-up Component

The job placement office of the Harlandale Independent School District began operating on March 6, 1972. Between this time and the project's completion on June 30, 1973, 907 individuals were placed in full- or part-time positions.

As described in Harlandale's letter of assurance, the coordinator of placement and follow-up was to be approvable as a vocational teacher and must have had at least two years teaching experience. In addition, he or she must have had at least two years of occupational wage-earning experience other than teaching, as well as job placement experience. The position was filled by Wilma McCury.

The placement coordinator maintained contact with students, school personnel, and the community at large. The business community was contacted through both mailings and personal visits; in addition, the coordinator participated in the activities of business and community organizations, such as the Administrative Management Society, National Secretaries Association, National Alliance of Businessmen, Chamber of Commerce, and PTA. She also maintained contact with the Texas Employment Commission, San Antonio Neighborhood Youth Organization, and other training and employment agencies and organizations. From these associations, information on employment opportunities in San Antonio was gathered and a job file established and maintained.

Within the school, the coordinator established contact with vocational teachers, counselors, and administrators. These personnel were provided job opportunity information for their students through such materials as job explanation brochures from the Texas Employment Commission, the Bureau of Labor Statistics, the "San Antonio Occupational Outlook," and other career education bulletins.

The placement coordinator helped students to secure part-time or full-time jobs, setting up appointments with prospective employers, offering information on interview procedures and personal appearance, and following up student-employer interviews by telephone or personal visit. Information on employment opportunities was provided through bulletin boards, classroom visits, individual contacts, and "opportunity room" discussions; in addition, a one-day study course in job procedures was conducted during the month of April for graduating seniors, at which time they were encouraged to register with the placement office for employment.

Students were also provided information concerning post-secondary academic and vocational education, scholarships, etc. Assistance was offered to high school dropouts in securing employment which offered on-the-job training.

The major problem encountered in job placement was the placing of fourteen- and fifteen-year-old students. In some instances, students aged twelve and thirteen years sought employment assistance. *It is extremely difficult*, in a city the size of San Antonio, to find employers who are willing and able--because of insurance and compensation laws--to hire individuals under the age of sixteen.

The Harlandale Independent School District also developed a computerized program of occupational follow-up, on contract with the Region XX Education Service Center, to maintain records on each student for a period of five years after the student leaves school, whether he leaves by graduation or withdrawal.

All pupils in grades 8 through 12 participated in this follow-up program. Data collected from these students, which will be updated annually, included personal data such as the student's address, social security number, sex, etc. School and career data included a list of subjects taken each year, and information as to career choices and vocational training. Graduage and dropout follow-ups included information as to the individual's employment status, type of employment held, progress in that employment, and post-secondary training and service in the armed forces. Some difficulty was encountered in obtaining complete information from each student and ex-student.

The completed follow-up study, which included approximately 6,000 students in grades 8 through 12, indicated job preferences both by clusters and by 970 job titles; the number enrolled in each of the district's secondary courses; distribution by sex, age, ethnic background, and socio-economic status; full-time employment by career field; and a statistical summary.

Community Involvement Component

The wide range of contacts and activities of the Community Involvement component are reflected in the summary below:

The community involvement coordinator arranged 29 community career education presentations to such organizations as PTA's, the Chamber of Commerce, and school faculty meetings. Seven presentations were made to local colleges and universities.

Resource speakers totaling 310 and representing all 15 work clusters addressed classes ranging from special education to pep squads. Students went on 300 field trips to businesses such as the San Antonio Express Publishing Company, Globe Department Store, Baptist Memorial Hospital, and San Antonio College.

Forty-five college departments ranging from political science to upholstery, from English to data processing, contributed time and knowledge to the district's students as a part of the Career Education program.

The coordinator served as chairman of the Task Force on Career Training for the Human Resource Committee of the Chamber of Commerce and served on the Chamber's Education Committee and on the Ambassadors Committee.

In-service meetings or workshops were arranged with Southwestern Bell Telephone Company, local military installations, and local business establishments.

The coordinator worked with the National Alliance of Businessmen on Project "Yes" and the Career Guidance Institute. Discussions were held with local college professors concerning the educational theory of career education.

Through the office of the Community Involvement component, career education personnel and students appeared on ten local television "talk shows." A radio broadcast was made by the coordinator on KBAT. Fifteen articles were written and printed, at various times, in local newspapers.

Project Design and Procedures: Houston

The Houston Independent School District's research and development project in career education, like those of Fort Worth and Harlandale, was divided into components. These components were: (1) an evaluation component at the elementary level, (2) curriculum preparation at the middle school level, and (3) guidance and counseling.

Director of the project was Mr. J. B. Whiteley, Superintendent for Occupational and Continuing Education of the Houston Independent School District, whose educational background included both a bachelor's and a master's degree in Industrial Education. Mr. Whiteley devoted ten percent of his time to the project's management; no grant money was applied to his salary.

A Project Coordinator, Mr. T. C. Harrell, was the overall coordinator of all phases of the career development program. Mr. Harrell held a bachelor's degree in Industrial Arts and a master's degree in Administration; his experience included 39 years of teaching and administration, with 14 years as a junior high principal and three years in the Houston Independent School District's Central Administrative Offices as Director of Secondary Schools. His current involvement was in organizing and developing the career orientation program at the middle school level. Mr. Harrell devoted fifty percent of his time to the project; no grant money was used for his salary.

Evaluation Component

The major focus of the project consisted of evaluation of the Occupational Awareness programs which had been established in 36 Houston elementary schools. This career education program is designed to promote interest in, and an awareness of, the world of work among elementary age children. The program is not designed to be used as a separate entity, but interfaced with all subject areas.

Project staff members involved with the Occupational Awareness program were as follows:

1. An Occupational Awareness Supervisor headed the elementary school component of the program and directed the activities of the Occupational Awareness consultants. This position was filled by Mrs. Mary Huckabee, who held a master's degree as well as a counselor's certificate and current work toward certification as an occupational orientation coordinator; her experience included 31 years of teaching in the Houston Independent School District and one year of coordinating the Houston Occupational Awareness program.

2. Fourteen Occupational Awareness Consultants were responsible for developing Occupational Awareness materials and relaying them to the 36 program schools.

3. A research associate coordinated the research component of the proposal. Monitoring and test data were used by the research associate as the basis for periodic program reports.

4. Two program monitors collected data from the 36 program schools in order to provide knowledge of implementation variation.

5. A data analyst prepared the data for the computer and made the analyses necessary for evaluation of the program.

6. The program evaluator and analysis officer directed the evaluation and research component of the project. This position was filled by Dr. L. Frank James, director of the Research Services unit of the Houston Independent School District, who held a master's degree in School Administration and a PhD. in Educational Psychology from The University of Texas at Austin. Dr. James' experience included 17 years as a teacher, counselor, and administrator; he held positions as professor at the University of Texas, Assistant Director of the Research and Development Center for Teacher Education at the University of Texas, and Director of Research at the University of Southern Mississippi.

Evaluation relevant to Occupational Awareness was twofold: process evaluation and evaluation of effects (product evaluation). Process evaluation was designed to aid the management personnel implementing the program in detecting, during the ongoing implementation process, the strengths and weaknesses of the overall programmatical effort. These strengths and weaknesses were expressed in terms of the concerns and needs of the program by field personnel. The process evaluation, therefore, provided feedback, monitoring, and quality control data for the implementation process.

In order to obtain systematic process data concerning the level and quality of program implementation, monitors visited and observed each of the 36 program schools at regular intervals throughout the school year. Monitors were trained in non-supervisory, observational techniques.

Inter-rater reliability (between .95 and .99) was established during this training and maintained throughout the evaluation. The monitors, using a standardized format (see List 1), gathered numerical and anecdotal information relative to the declared objectives. Regular monthly reports were made by the monitors through the research officer to the Superintendent of Occupational and Continuing Education (project director).

Each teacher and each school received a global rating on a scale of 1-5, with 1 indicating minimal implementation and evident interest. A mean teacher rating, a mean school rating and an overall mean rating (combining the mean teacher and mean school ratings) were computed for each of the 36 schools. A rank ordering of the schools according to the overall mean rating was made.

Evaluation of effects (product evaluation) was used to assess the overall effectiveness of the Occupational Awareness program. The paradigm was a pre-/post-test experimental group-control group design. The research hypothesis was that experimental schools in which the Occupational Awareness program was implemented would have a significant difference between pretesting and post-testing as measured by the Houston Occupational Awareness Inventory (HOAI).

(The following material is reprinted from the "Manual for the Use of the Houston Occupational Awareness Inventory," copyrighted 1973 by the Research Services Department of the Houston Independent School District, by permission of the director of the Houston Independent School District's research and development project in career education, Mr. J. B. Whiteley. Permission to reproduce this copyrighted material has been granted by the Houston Independent School District to the Educational Resources Information Center (ERIC) and to the Texas Education Agency, which is operating under contract with the U. S. Office of Education to reproduce ERIC documents. Reproduction by users of any copyrighted material contained in documents disseminated through the ERIC system requires permission of the copyright owner.)

"The Houston Occupational Awareness Investory was developed by the Houston Independent School District Research Services Department as a means of evaluating the level of awareness of career education-based concepts in elementary school children . . . (It) was developed in response to increasing interest and concentrated effort on the part of educators to broaden the scope of career information provided in the public schools . . . In undertaking the evaluation of the Houston Occupational Awareness program, researchers recognized that no standardized evaluation instrument was yet available for measuring dimensions of awareness of the world of work at the elementary school level. Therefore, the development of a new experimental instrument was necessary to carry out the evaluation procedures."

"The instrument purports to measure cognitive and affective changes brought about as a result of implementation of an Occupational Awareness curriculum. The basis of this instrument is different from such theoretical concepts as the developmental expansion of the self-concept, maturational factors, or other theories which might be introduced as explanations of growing awareness of work . . ."

List 1

OCCUPATIONAL AWARENESS MONITORING QUESTIONS

1. Are you using any Occupational Awareness Related Activities?
   a. If not, why not? Could you be more specific?
2. What is your opinion about Occupational Awareness Related Activities you have used?
   a. What activites suggested by the consultant have you found to be of particular value?
3. How do your children respond to Occupational Awareness Related Activities?
4. Do you feel you have enough materials on hand to implement the suggested Occupational Awareness Related Activities?
5. In what way has the consultant been helpful to you?
   a. Are there other things that you would have him do for you or other ways you would have him respond to your needs?
6. Do you have any suggestions for possible modifications of the program?
7. Do you have the inserts to go with the unit you are currently teaching?
8. Are the inserts helpful?
9. Do you feel that you fully understand the goals of the present Occupational Awareness Program?
10. Do you feel that the program is of value to Elementary School children?
11. What aspects of Occupational Awareness have increased the students' interest in career education?
12. Did the inservice provide an adequate introduction to Occupational Awareness?
13. What additional areas of emphasis do you feel a career education program should have that are lacking in Occupational Awareness now?

"The curriculum consultant staff, with the assistance of the research team, developed a set of fifteen Occupational Awareness concepts and corresponding behavioral objectives relevant to the elementary age child. The introduction of related materials and emphasis on concepts at the various grade levels are sequenced as indicated in Table 3. Item writers inferred from curriculum activities the types of discriminations which would indicate 'mastery' of a concept . . . The Houston Occupational Awareness Inventory, Primary Level (K-2), is based on the first nine Occupational Awareness concepts and related behavioral objectives; the Intermediate Level (3-6) is based on all fifteen concepts (see Table 4)."

"The criteria for selection of teams for instrument development included (1) items should reflect one or more of the fifteen Occupational Awareness concepts presented earlier and bear as direct a relationship as possible to the behavioral objectives stated for each concept, (2) item content dealing with job descriptions or occupational knowledge should be accurate when compared with current vocational literature, (3) items should not penalize poor readers or non-readers, (4) there should be a broad coverage of the occupational spectrum, and (5) the occupation used in an item should be one which can be clearly depicted by a line drawing, with such clues as uniforms, tools, or work activity."

"Information about occupations, training requirements, etc., used in pictorial and verbal item content was verified against such standard references as the Occupational Outlook Handbook, the Dictionary of Occupational Titles, and Vocational Education and Occupations."

"Results of early item trials indicated that two forms, Primary (K-2) and Intermediate (3-6) would be necessary. Items with desirable distributions for kindergarten children proved too easy for children in the third grade. In order to minimize differences in reading level, each item consists of three pictures of workers or of activities or objects relevant to work. Each item question is read aloud by the examiner and the child is instructed to mark the "best" picture choice as his answer."

"It is desirable that items reflect cognitions and affects which are emergent but not firmly established in young children. Therefore, items were retained after item trials only if 50 percent or fewer subjects passed the item, with each incorrect distractor being plausible enough to be chosen by around 25 percent of the subjects. It was also reasoned that a difficulty level of 50 percent or fewer passing an item would allow sufficient ceiling for higher post-test scores even for those children who scored high on the pretest. Fifteen items were selected for scoring from a pool of 153 for the Primary Level of the test, and seventeen were selected from a pool of 163 for the Intermediate Level. Many items in the pools were modifications of items from earlier trials."

"A series of three item trials was conducted for each level of the test. A total of 819 subjects was tested with the three preliminary versions of the Primary Level, and a total of 768 was tested with the three preliminary versions of the Intermediate Level. These samples of children were selected from eleven schools not in the Occupational Awareness program. The schools were located in the following socioeconomic areas as

Table 3

SCOPE AND SEQUENCE OF C.A. CONCEPTS BY GRADE LEVELS

Concept	Grade Level						
	K	1	2	3	4	5	6
1. Each person is valuable and can be a worthwhile worker.	X	X	X				
2. Work merits respect and is important.	X	X	X				
3. Some workers produce goods, some provide services, and some do both.	X	X	X				
4. Cooperation is an important part of career success.	X	X	X	X			
5. Careers are of wide variety.	X	X	X	X			
6. Individuals need training for careers.	X	X	X	X	X	X	
7. School is part of the preparation for a career.		X	X	X	X	X	
8. People work for various rewards and satisfactions.			X	X	X	X	X
9. Careers can be grouped into occupational fields.			X	X	X	X	X
10. Specialization leads to interdependency				X	X	X	X
11. Jobs change due to supply and demand, geographic location and changing conditions.				X	X	X	X
12. Individuals differ in their abilities, interests, aptitudes and values.				X	X	X	X
13. Workers can adapt their skills to perform different jobs.					X	X	X
14. Career choice is a developmental process.						X	X
15. A planned educational program can provide effective career training.							X

Table 4

HOAI ITEMS GROUPED ACCORDING TO CURRICULUM SCOPE AND SEQUENCE

	Primary Level			Intermediate Level			
CONCEPT	K	1	2	3	4	5	6
1	3, 4, 5, 19, 21						
2	8, 7*			15*			
3	11, 9* 10*			4*			
4	12*, 13*			18,19			
5	14, 6*						
6	16, 17, 15*			7, 10, 12, 16*			
7		18		14, 8*, 17*			
8			1, 2 20*	20, 21, 24			
9			22, 23 24*	3			
10				23*			
11				1, 2, 6, 9, 22*			
12							
13					11, 13		
14							
15							5

* Items omitted from scoring

Table 5

CONSULTANTS' PER CENT AGREEMENT AS TO CONCEPTS BEING MEASURED

PRIMARY LEVEL			INTERMEDIATE LEVEL		
ITEM NO.	CONCEPT	% AGREEMENT	ITEM NO.	CONCEPT	% AGREEMENT
1. *	8	50%	1. *	11	100%
2. *	8	33%	2. *	9,11	70%
3. *	1	77%	3. *	9	100%
4. *	1,4	33%	4. *	15	44%
5. *	1	62%	5. *	11	78%
6. *	2,5	75%	6. *	6	56%
7. *	3	100%	7. *	11	100%
8. *	5	0%	8. *	6	56%
9. *	6	100%	9. *	13	89%
10. *	6	100%	10. *	6	75%
11. *	7	87%	11. *	13	100%
12. *	1	87%	12. *	7	78%
13. *	1	75%	13. *	4	89%
14. *	9	100%	14. *	4	78%
15. *	9	57%	15. *	8	36%
			16. *	8	67%
			17. *	8	75%
OVERALL AGREEMENT		70.2%	OVERALL AGREEMENT		76.2%

designated by the census tract: upper middle, four; lower middle, four; and lower, three. Ethnic balance of the sample schools was as follows: 31 percent Negro-Americans, 9 percent Mexican-Americans, and 60 percent others. The preliminary versions were administered in the spring of 1972, with the exception of the last Intermediate preliminary test, which was administered in the summer of 1972. These item trials yielded 24 items at each level for field testing; 16 were retained for scoring at the Primary Level and 17 at the Intermediate Level.

"Pictures on both levels of the test were validated by asking a sample of 20 children (ten per level) to describe them to be sure that the content of the illustrations was accurately perceived by children. The subjects were enrolled in a summer day care center in a middle class socioeconomic area. Each picture was presented to each subject at the appropriate age level, and the child was asked to describe the pictures with the understanding that the picture was related to "work" in some way. HOAI pictures were validated in this way so that children's responses should reflect accurate awareness of the concept expressed in the picture, rather than logical misinterpreations of the pictures due to misleading cues."

"A pool of 24 items obtained from item trials was field tested for the purpose of final item selection in terms of reliability, validity, and the establishment of group norms."

"Field testing yielded 15 items for the Primary Level of the test, and 17 items for the Intermediate Level of the test. Item analysis (N=6000) provided the basis for decisions on item retention. The sample was composed of five classes randomly selected from Occupational Awareness program schools, and stratified by grade level. Thus, 25 were classes represented at each of the seven grade levels from kindergarten through the sixth grade. Criteria for retention of an item for scoring including (1) a symmetrical distribution of response choices and (2) a significant ($p=.01$) point-biserial correlation coefficient with the total score of the test. The criteria of symmetrical distributions and significant point-biserial correlations were met by all 15 items retained for the Primary Level and 17 items retained for the Intermediate level."

"Another criteria for the retention of an item was the degree to which Occupational Awareness Curriculum Consultants agreed that the item measured the concept for which it was purported to measure. The agreements are expressed as percentages in Table 5."

"If the consultants expressed a strong feeling that a particular item measured something which was not taught at the intended age level, the item was dropped from scoring."

"The means and standard deviations of total raw scores reported below were obtained for each grade level from a sample (N=4967):

MEANS AND STANDARD DEVIATIONS FOR EACH GRADE

Primary Level				Intermediate Level			
Grade	N	MEAN	SD	Grade	N	MEAN	SD
K	595	4.92	1.80	3	804	4.99	1.99
1	644	5.79	2.13	4	767	5.54	2.08
2	654	6.61	2.27	5	736	6.28	2.27
				6	747	7.10	2.25

"Information for reliability and validity description was partly obtained from the two median income schools (described earlier). Despite efforts to utilize two equivalent and representative schools, there was a significant difference in test performance between the two schools. When the data from the two schools was combined, item analysis results were virtually the same as for the large sample. Analysis of variance revealed a significant F-ratio for between group variance. One of the schools scored significantly higher on the test than did the other. This finding indicates that there may be a systemmatic influence on test scores due to racial origin, but the degree of bias is not known, nor is it known whether or not factors such as socioeconomic level, vocational level of parents, or income level of parents may be contributing. This finding indicates that caution should be used in interpreting test findings on groups of differing ethnic origins."

"Content validity was assessed by asking judges with expertise in occupational education and elementary education to (1) indicate their own choices of best answers, and (2) rate test items according to the global notion of "awareness of the world of work."

"Selections of "best" answers by independent judges were scored; the total test score results are reported below, together with percentages of their agreement with the test developers' correct response key. The judges felt the Primary Level items presented a more difficult discrimination task than did the Intermediate Level items, as indicated by their written comments."

INDEPENDENT JUDGES' SCORES

Level	Range	Mean	% Agreement with Key
Primary	9-14	10.81	70%
Intermediate Level	12-17	13.39	82%

"The seven independent judges rated each item on a scale from 1 to 4 according to how well the judges felt the item measured the global notion of "awareness of the world of work." 1 = no correspondence, 2 = fair, 3 = good, and 4 = excellent. Ranges and mean ratings for each level of the test are given below. The results indicate that the judges considered the test adequate for the purpose intended--measuring "awareness of the world of work."

INDEPENDENT JUDGES' RATINGS

Test Level	Range of Item Mean Ratings	Total Test Mean Ratings
Primary Level	2.29 - 3.14	2.79
Intermediate Level	2.29 - 3.29	2.87

"Content validity is also indicated by the data in Table 5 which gives the percentage of agreement between Occupational Awareness Curriculum Consultants and research staff intentions as to which concept an item measured. Agreement was good for any overall level of the test (from 70% to 76%), while agreement on individual items ranged from 0 percent to 100 percent."

"The Curriculum Consultants rated each item's correspondence to its concept. Analysis by intraclass correlation indicated that, while the reliability of any one consultant's ratings for all items was very low, the reliability of the mean rating was significant. This means that if another group of judges similar to the group of consultants were to rate the items, similar results would be obtained."

"The factor analysis indicated that some items clustered together in a meaningful fashion--the clusters or factors matched the Curriculum Concepts. Factors, items, and concepts are grouped for the Primary Level in Table 6 and for the Intermediate Level in Table 7. If a varimax (rotated) factor loading for an item falls below .50, that item must be regarded as a weak or suspicious member of the factor. Ordinarily, such items would be dropped from scoring, but the experimental nature of the instrument dicates that they be retained pending further test development. Even where factors do not reflect the concepts exactly, inspection reveals that many of the concepts overlap to a considerable degree in terms of their ultimate educational goals. Other reasons for a cluster to contain items from more than one concept would be the tendency of young children to react first to pictorial content, plus the different ways in which the verbal content of a question might influence different children."

"Total test reliability was established on the total test scores (test-retest paradigm) by means of the Pearson Product-Moment Correlation Coefficient (Primary N=278; Intermediate N=414). Both Pearson r's were significant ($p < .01$):

PEARSON PRODUCT-MOMENT RELIABILITY
CORRELATION COEFFICIENTS FOR TOTAL TEST SCORES

(Test-Retest)

Primary Level	n=278	.3528
Intermediate Level	n=414	.6230

Table 6

FACTOR ANALYSES - PRIMARY LEVEL

(N=278)

FACTOR NAME	ITEM	V. WT.	CONCEPT
I. Knowledge of Service Occupation	11	(-0.6891)	3
	8	(-0.6165)	5
	22	(-0.5138)	9
	18	(.4569)	7
II. Self-Concept as Independent Worker	19	(.7733)	1
	21	(.5368)	1
III. Rewards of Work	1	(.7809)	8
	4	(.6643)	1
IV. Importance of Training	16	(-0.7786)	6
	17	(-0.6229)	6
V. Unique Factor	14	(-0.7969)	5
VI. Knowledge of Occupational Fields	23	(.8217)	9
	2	(-0.4054)	8
VII. Self-Concept and Home Chores	5	(.8140)	1
	3	(.3956)	1

Table 7

FACTOR ANALYSES - INTERMEDIATE LEVEL

(N=414)

FACTOR NAME	ITEM	V. WT.	CONCEPT
I. Economic Motivation	20	(.7190)	8
	13	(.6537)	13
	21	(.6110)	8
II. Importance of Training	10	(.6380)	6
	12	(.5014)	8
	9	(-0.6894)	11
III. Adaptive Behavior	19	(.6695)	4
	18	(.5503)	4
	11	(.4910)	13
IV. Structured "School" Training	7	(.7276)	6
	14	(.6670)	7
V. Factors Determining Whether or Not One Can Work	1	(.7577)	11
	6	(.6656)	11
VI. Unique Factor	3	(.8325)	9
VII. Verbal Comprehension Factor	2	(-0.3860)	11
	24	(-0.8019)	8
VIII. Unique Factor	5	(-0.8854)	15

Guidance and counseling component

The primary emphasis of the counseling component was to expand the professional awareness of career education at the elementary level. The project staff took the following steps to achieve that goal:

1. Established mini centers in the six administrative areas within the district, whereby counselors, teachers, and administrators could be informed and assisted in implementing the Career Awareness program.
2. Conducted in-service meetings and developed in-service materials with professionals in the elementary schools.

In addition, the career awareness supervisor visited all elementary schools in the district to further develop expertise on the part of counselors, librarians, principals, and teachers.

Curriculum development component

The goal of the curriculum development component was to assist in the expansion of career education at the middle school level. To implement this goal, the project staff gathered information from the thirteen teachers of Career Orientation in Houston junior high schools, from business and industry, experimentation, miscellaneous contacts, and reading materials from local state, and national sources. From this information, a four-part curriculum guide was developed.

Results and Accomplishments

Results and Accomplishments: Fort Worth

In order to provide an overall accounting of the project's results and accomplishments, below are listed the major sub-goals of the project and the accomplishments related to each.

Sub-Goal 1: To create at the elementary level a career awareness instructional program which is integrated with on-going curriculum projects.

Judging from student responses, there was a high degree of effectiveness during the fieldtesting phase. Students became more aware of the job choices available to various members of society and of the attitudes associated with getting a job and earning a living in contemporary society.

There was clear evidence that the project had the support of the administration, counselors, teachers, parents and students within the project schools. By the end of the project over eighty percent of the teachers within the project sites were involved in interweaving career awareness into ongoing instructional programs.

To assist the teacher, community resource personnel were available and were utilized in various activities.

Teacher committees were utilized to develop strategies throughout the school year. As a result of the total effort of the elementary component, the following major accomplishments occurred:

1. Developed career awareness curriculum guides in grades K-5 and supplementary aids to be integrated with the total school curriculum.
2. Developed through extensive training programs at least two teacher trainers, teacher resource personnel, in each project site for indepth in-service education at the building level.
3. Developed teacher education programs in career awareness implementation to continue ongoing in-service for all staff personnel at each school.
4. Developed a model for career guidance and counseling approaches, materials, and personnel.
5. Established parent involvement through a variety of activities.
6. Involved business and the community through extensive study tours.

Sub-Goal 2: To develop an awareness of career education concepts on the part of students, teachers, counselors, and parents in the middle and high school levels and to explore pilot techniques and processes of implementation.

The middle and high school components, as described in earlier sections of this report, were compatible in terms of goals, objectives, strategies, techniques, and approaches. The primary difference was the age and maturity level of the students within each component. Major outcomes were as follows:

1. Developed and implemented pilot courses in Career Opportunities at both the middle and high school levels.
2. Created career resource centers in each of the middle and high school sites to be used in career development by teachers, students, and community people.
3. Developed some 65 teacher trainers through extensive training programs and activities.
4. Identified and established processes to better utilize the business and industrial community within the emphasis placed on career education at the secondary level.
5. Established a model for career counseling and guidance techniques and procedures for career-oriented programs.

Sub-Goal 3: To establish a placement program for exiting students, dropouts, and graduates that would provide students with information and guidance leading directly to full-time employment, post-secondary training less than a baccalaureate degree, or a four-year college program.

Placement procedures were carefully followed during the implementation stage of the project in Arlington Heights and Green B. Trimble Technical High Schools; the following results were noted:

Data from the student career survey indicated little change in the percentage of students who planned to attend college at the time of graduation; however, of the 382 students who indicated plans to attend college at the end of the 1971-72 school year, only 260 were attending college at the time of follow-up. There seemed to be a need for more counseling in career decision making, and the follow-up of the 1972-73 graduates should reveal the effect that career counseling has had upon these graduates. There was no significant change in the number of students who planned to enter post-secondary vocational training or commercial business colleges. The number of students entering military service decreased by 2.15 percent, probably because of the expiration of federal draft laws. The most significant change was found in the number of students who indicated a career choice prior to graduation. At the end of the 1971-72 school year, before the implementation of the career education program, 51.92% of the graduates indicated a career choice, compared to 92.67% of the 1972-73 graduates. There was also a noticeable decrease in the number of students who planned to work part-time while attending college, but there was no explanation for the 13.76% decrease.

Graduates, parents, and employers were encouraged to know that the Fort Worth Public Schools were assisting students in job placement. After successfully placing graduates in jobs, many companies repeatedly called the placement office for additional graduates to fill their company needs. The placement service counseled 472 graduates for job placement, and referred 392 of these students to companies for interviews; 361 were employed and 31 students were deferred for placement at a later date.

Except for one company, which was a newly-formed industry and was flooded with job requests, businesses were most receptive to and interested in the placement services. More than 145 phone calls were received from business and industry requesting graduates for interviews and possible employment. These calls resulted in listings for 265 jobs and 138 personnel visits made by the placement coordinator.

Placement of all graduates is becoming increasingly difficult, because the quarter system allows students to graduate from high school at an earlier age. Individuals under eighteen years of age are restricted by law to nonhazardous jobs; this often means restriction to lower-salaried, more competitive positions.

Sub-Goal 4: To assess and evaluate the various phases and components of the total project with emphasis given toward the transportability of successful elements to additional schools for school year 1973-74.

The results of this area of development were:

1. Developed ongoing process evaluation with all program components.

2. Worked with third party evaluators.

3. Provided tentative recommendations for continuation and expansion of career education in the Fort Worth district.

Career education as identified in each component of the project proved to be a significant part of the total instructional program within the eight project schools. Positive attitudes and acceptance on the part of students, parents, business community, teachers, and administrators proved to be well above expectations for the first year's operation.

Due to the project's success and the general desire for career emphasis in the Fort Worth district, the Board of Education for the Fort Worth Public Schools approved expansion of the career education project for school year 1973-74. The expanded program calls for sixteen additional schools, or a total of twenty-four schools, to be involved in career education.

Results and Accomplishments: Harlandale

One important accomplishment of the career education project was the writing of career-curriculum guides which combined required curriculum concepts, the performance objective approach, career materials and concepts relevant to the basic curriculum concepts, and audiovisual materials.

Guides were completed in sixth, seventh, and eighth grade math, Fundamentals of Mathematics I and II, Algebra I and II, geometry, mathematics of consumer economics, general physical science, Biology I and II, eighth grade earth and life science, chemistry, physics, seventh grade reading and composition, and seventh, eighth, and ninth grade English.

Also completed were Texas history and geography for the seventh grade, American history to 1865, American history 1865 to the present, world history studies, economics, sociology, Mexican-American studies, Latin American studies, advanced social studies, American government, world geography studies, and Spanish I.

Elementary guides for grades kindergarten through four were completed in the subject areas of mathematics, language arts, social studies, and science, incorporating character education concepts and a bilingual career education column. A music guide for the fifth grade was also completed.

The counselors acquired files of occupational literature for use by classes desiring information on certain career areas. Large amounts of career-related audiovisual materials were purchased for the district's audiovisual department, and career libraries and other literature were placed in each of the four middle and two high school libraries. Career books for elementary students were purchased to be placed in the mobile libraries serving the elementary schools.

The community involvement coordinator compiled a booklet of resource speakers, which was given to each teacher. Periodic supplements to this guide were distributed, and a revised guide was assembled for use next school year.

Various in-service materials were designed and used in the many meetings relating to career education. These materials included slide-tape presentations, overhead transparencies, brochures detailing the makeup of each of the components, and plans for initiating career education programs. Also created by the project were numerous elementary career education materials, including career coloring books, career bag puppets, and career crossword puzzles.

An important accomplishment was the program's influence upon members of the school district and local community. Teachers and principals came to accept the importance of career education in a contemporary curriculum. The community parents learned that career education fills a need in their children's lives. Local businessmen seemed to feel a closer kinship with the school district after realizing that their goals coincide--both want young people who can be productive and contributing members of society.

Between March 6, 1972, and June 30, 1973, 907 students were assisted by the placement office to find jobs; 63 percent of these were permanent full-time positions, 25 percent were permanent part-time positions, and 12 percent were day jobs. The total yearly income tax collected from the salaries of placed students was $240,540.00; social security payments amounted to $117,024.00. Full-time placements paid approximately $18,005 in income tax and $8,078 in social security each month; the part-time placements paid approximately $2,040 in income tax and $1,674 in social security each month.

As a part of the follow-up activities, a printout was completed on 6,000 students in grades 8-12, indicating student job preferences both by cluster and by 970 job titles; the number enrolled in each of the district's secondary courses; distribution by sex, age, ethnic background, and socioeconomic status; a breakdown of full-time employment by career field; and a statistical summary.

Detailed booklets explaining job placement and follow-up procedures were written as aids to other agencies wishing to implement a similar program.

Finally, all persons touched by the program--students, parents, teachers, businessmen--became aware of the concept of career education and its role in the school district.

Results and Accomplishments: Houston

Evaluation Component

1. Process evaluation

    The process evaluation data, as collected by classroom monitors, reflected an evolving and developing Occupational Awareness program. Although there were no formal changes in the monitor's questions during the implementation of the program, teachers' responses to those questions did change. Likewise, as the program evolved, the needs and concerns expressed by teachers changed. What were needs and concerns during the program's initiation gave way to those of maintaining the ongoing program at an increasingly higher level of implementation. For example, the majority of teacher comments at the beginning of the year were excuses for failure to implement the program, or questions regarding the role of the Occupational Awareness consultants. Concerns of teachers rapidly changed to expressions of specific needs to obtain full implementation within the classroom.

    Identified problem areas numbered 29 in the first monitors' reports. These are gathered under major headings in Chart 4, which illustrates the diminution of concerns through the duration of the program. Initially, problems centered around the mechanics of implementation. In the final report, concerns were almost exclusively in the area of the appropriateness of specific activities and requests for supplies and materials needed to further integrate activities into curriculum areas.

    Progress in program implementation is clearly evident in the monitors' reports, which show an increase in participation from 47 percent of teachers in the first report to 73 percent in the final one.

Chart 4

In Figure 1, the monitoring period in which the area of concern manifested itself is indicated by an X.

	MONITORING REPORT PERIOD				
AREA OF CONCERN	Oct 30 1972-- Nov 10 1972	Nov 13 1972-- Dec 1 1972	Dec 4 1972-- Jan 15 1973	Jan 16 1973-- Feb 2 1973	Feb 5 1973-- Mar 6 1973
School Personnel	x			x	
Curriculum	x	x		x	
Consultants	x	x	x	x	
Funds			x		
Time	x	x			
Training			x		
Materials, Supplies	x	x	x	x	x
Appropriateness	x			x	x
Interest	x				
AV's	x				
Display	x				
Activities			x		x
Space	x	x			
Equipment			x		
Timing				x	

Significantly, through actual participation increased during the project period, the major complaint of teachers not implementing the program was the shortage of time. The percentage indicating time was a problem increased from 26 percent in October, 1972, to 57 percent in March, 1973. Of the teachers not implementing Occupational Awareness-related activities, 27 percent in March, 1973, did not like the program as compared with 11 percent in October, 1972. These data suggest that some relatively small number of teachers consistently resisted implementation, and probably account for a failure, overall, to achieve complete implementation.

2. Evaluation of effects

The research hypothesis was that the 36 experimental schools in which the Occupational Awareness program was implemented would have a significant difference between the pretesting and post-testing as measured by the Houston Occupational Awareness Inventory. The experimental results did not support the research hypothesis.

At each grade level a comparison was made between the pretest differences for the control and experimental schools. A significant difference was obtained, at the .05 level of confidence, for the following grades: kindergarten, first, and fourth. No significant difference was obtained for the second, third, fifth and sixth grades. Where a significant difference between the experimental and control schools pretest scores existed, an analysis of covariance was used to statistically control for pretest differences.

For the kindergarten subjects, the adjusted group mean for the control group was significantly greater than the adjusted group mean for the experimental group (see Table 8). There was, however, no significant difference between the adjusted group means for the control and experimental groups of first and fourth grade subjects (see Tables 9 and 12).

No significant difference between the pretest and post-test HOAI scores for the second, third, and fifth grades was obtained for the experimental and control groups (see Tables 10, 11, and 13).

A significant difference was obtained between the pretest and post-test scores for the experimental and control groups of sixth grade subjects. However, there was no significant difference between the post-test means for the experimental and control groups ($\underline{t}$ = .0722), as demonstrated in Table 14. Table 15 presents a non-statistical summary, comparing the adjusted group means or pretest/post-test mean difference in performance on the HOAI for the experimental and control groups of grades kindergarten through sixth.

Guidance and counseling component

The counseling project staff reported success in achieving its goals. The

Table 8

Comparison Between the Adjusted Group Means (Controlling for Pretest Differences) in Performance on the H O A I for the Experimental and Control Groups of Kindergarten Subjects

	N	Adjusted Group Means	Derived t value	Critical t value $\alpha = .05$
Control Group	56	6.52	-2.95 *	1.96
Experimental group	66	5.34		

* conclude that the adjusted group mean for the control group is significantly greater than the adjusted group mean for the experimental group at the .05 level of confidence

Reject $H_0: \mu_{\text{control group adj. group mean}} - \mu_{\text{experimental adj. group mean}} = 0$, at the .05 level of confidence

Conclude: $\mu_{\text{control group}} > \mu_{\text{experimental group}}$

Table 9

Comparison Between the Adjusted Group Means (Controlling for pretest differences) in Performance on the H O A I for the Experimental and Control Groups of First Grade Subjects

	N	Adjusted Group Means	Derived t value	Critical t value $\alpha = .05$
Control Group	69	6.17	.709*	1.96
Experimental Group	76	5.34		

* Conclude that there is no significant difference between the adjusted group means for the experimental and control groups at the .05 level of confidence

Failed to reject $H_0: \mu_{\text{control group adj. group mean}} - \mu_{\text{experimental group adj. group mean}} = 0$, at the .05 level of confidence

onclude. $\mu_{\text{control group}} = \mu_{\text{experimental group}}$

Table 10

COMPARISONS BETWEEN THE PRETEST-POSTTEST MEAN DIFFERENCES IN PERFORMANCE ON THE H O A I FOR THE EXPERIMENTAL AND CONTROL GROUPS OF SECOND GRADE SUBJECTS

	Mean Difference	S.E. Mean Difference	df	Derived t value	Critical t value $\alpha=.05$
Control Group (N=67)	-.299	.265	66	-1.127 *	1.99
Experimental Group (N=70)	.629	.325	69	1.934 *	1.99

* There was no significant difference between the pretest and posttest scores for either the experimental or control groups at the .05 level of confidence.

Failed to reject $H_0: \mu_{D_{(\text{control group})}} = 0$, at the .05 level of confidence

Conclude: $\mu_{D_{(\text{control group})}} = 0$

Failed to reject $H_0 \; \mu_{D_{(\text{experimental group})}} = 0$, at the .05 level of confidence

Conclude: $\mu_{D_{(\text{experimental group})}} = 0$

Table 11

COMPARISONS BETWEEN THE PRETEST-POSTTEST MEAN DIFFERENCES IN PERFORMANCE ON THE H O A I FOR THE EXPERIMENTAL AND CONTROL GROUPS OF THIRD GRADE SUBJECTS

	Mean Difference	S.E. Mean Difference	df	Derived $\underline{t}$ value	Critical $\underline{t}$ value $\alpha = .05$
Control Group (N=54)	.315	.324	53	.973*	2.00
Experimental Group (N=109)	.257	.238	108	1.079*	1.98

* There was no significant difference between the pretest and posttest scores for either the experimental or control groups at the .05 level of confidence.

Failed to reject $H_0 : \mu_{D\,\text{(control group)}} = 0$, at the .05 level of confidence

Conclude: $\mu_{D\,\text{(control group)}} = 0$

Failed to reject $H_0 : \mu_{D\,\text{(experimental group)}} = 0$, at the .05 level of confidence

Conclude: $\mu_{D\,\text{(experimental group)}} = 0$

Table 12

Comparison Between the Adjusted Group Means (Controlling for Pretest Differences) in Performance on the H O A I for the Experimental and Control Groups of Fourth Grade Subjects

	N	Adjusted Group Means	Derived t value	Critical t value $\alpha=.05$
Control Group	71	6.37	1.89 *	1.96
Experimental Group	50	7.22		

* Conclude that there is no significant difference between the adjusted group means for the experimental and control groups at the .05 level of confidence

Failed to reject $H_0: \mu_{\text{control group adj. group mean}} - \mu_{\text{experimental group adj. group mean}} = 0$, at the .05 level of confidence

Conclude: $\mu_{\text{control group}} = \mu_{\text{experimental group}}$

Table 13

COMPARISONS BETWEEN THE PRETEST-POSTTEST MEAN DIFFERENCES IN PERFORMANCE ON THE H O A I FOR THE EXPERIMENTAL AND CONTROL GROUPS OF FIFTH GRADE SUBJECTS

	Mean Difference	S.E. Mean Difference	df	Derived t value	Critical t value $\alpha = .05$
Control Group (N=77)	.416	.276	76	1.532 *	1.96
Experimental Group (N=101)	.206	.249	100	.828 *	1.96

* There was no significant difference between the pretest and posttest scores for either the experimental or control groups at the .05 level of confidence.

Failed to reject $H_0: \mu_{D\,(\text{control group})} = 0$, at the .05 level of confidence

Conclude: $\mu_{D\,(\text{control group})} = 0$

Failed to reject $H_0: \mu_{D\,(\text{experimental group})} = 0$, at the .05 level of confidence

Conclude: $\mu_{D\,(\text{experimental group})} = 0$

Table 14

COMPARISONS BETWEEN THE PRETEST-POSTTEST MEAN DIFFERENCES IN PERFORMANCE ON THE H O A I FOR THE EXPERIMENTAL AND CONTROL GROUPS OF SIXTH GRADE SUBJECTS

	Mean Difference	S.E. Mean Difference	df	Derived t value	Critical t value $\alpha = .05$
Control Group (N=71)	.521	.238	70	2.189*	1.99
Experimental Group (N=85)	.529	.238	84	2.228*	1.99

* There was a significant difference between the pretest and posttest scores for both the experimental and control groups at the .05 level of confidence; however, there was no significant difference between the experimental and control groups posttest scores.

Reject $H_0\ \mu_{D\,(\text{control group})} = 0$, at the .05 level of confidence

Conclude: $\mu_{(\text{pretest control group})} < \mu_{(\text{posttest control group})}$

Reject $H_0: \mu_{D\,(\text{experimental group})} = 0$, at the .05 level of confidence

Conclude: $\mu_{(\text{pretest experimental group})} < \mu_{(\text{posttest experimental group})}$

Failed to reject $H_0: \mu_{(\text{posttest control group})} - \mu_{(\text{posttest experimental group})} = 0$, at the .05 level of confidence

Conclude: $\mu_{(\text{posttest control group})} = \mu_{(\text{posttest experimental group})}$

Table 15

A Nonstatistical Summary Comparing the Adjusted Group Means or Pretest-Posttest Mean Differences in Performance on the HOAI for the Experimental and Control Groups of Grades K Through 6

Grade	Significant
Kindergarten:	
Control group adjusted group mean greater than the Experimental group adjusted group mean	Yes *
First:	
Control and Experimental group adjusted group mean difference	No
Second:	
Control group pretest-posttest mean difference	No
Experimental group pretest-posttest mean difference	No
Third:	
Control group pretest-posttest mean difference	No
Experimental group pretest-posttest mean difference	No
Fourth:	
Control and Experimental group adjusted group mean difference	No
Fifth:	
Control group pretest-posttest mean difference	No
Experimental group pretest-posttest mean difference	No
Sixth:	
Control group pretest-posttest mean difference	Yes *
Experimental group pretest-posttest mean difference	Yes *
Control-experimental posttest mean difference	No

* Significant at the .05 level of confidence

counseling component developed a positive attitude in all persons contributing to elementary education in the Houston Independent School District, to the point that Occupational Awareness was initiated in every elementary school in the district for the school year, 1973-74.

Curriculum development component

The curriculum development staff produced a four-part curriculum guide, with copies distributed to the Texas Education Agency, public schools upon request, and to the U. S. Office of Education. The program has now expanded from nine to fifteen junior high schools and numerous other schools have requested the program. Increased interest has been shown each year.

Evaluation

Evaluation

In accordance with grant terms and conditions established by the U. S. Office of Education for research and development projects in career education, the Texas Education Agency selected a third-party evaluator to monitor the three individual projects. After proposals from several institutions were reviewed by a selection committee, a contract was awarded to the Center of Human Resources of the University of Houston.

The evaluation consisted of program observations and the administration of detailed questionnaires to teachers, counselors and administrators in project schools. Results indicated an overall acceptance of career education concepts and approaches on the part of teachers, counselors, and administrators, and general agreement that the programs had succeeded in expanding student awareness of both career opportunities and the attitudes and backgrounds necessary for success in specific vocations.

Major criticisms in the report concerned the lack of adequate communications between project staff and other personnel within project schools, and the need for improved organization of in-service training sessions.

The full evaluation report from the Center of Human Resources may be found in Appendix D.

Conclusions, Implications, and Recommendations

Conclusions, Implications, and Recommendations: Fort Worth

In evaluating the eighteen-month career education project, its personnel concluded that the initial set of needs and goals on which the project was funded proved to be realistic and beneficial to the local school district of Fort Worth, Texas. The project developed a better and more meaningful educational experience for the students of the eight target schools. It also produced a positive base of experiences which in turn founded expertise, materials, awareness and support of the philosophy and concepts of career education that can result in further direction and expansion.

The study produces data to reinforce the conclusion that the community of Fort Worth supports the concept of career education. Data also support the theory that strong cooperative relationships between the business community and schools are very necessary to fully implement career education concepts.

The Fort Worth project design gave much emphasis to personnel development. In assessing this approach it is concluded that strong and effective personnel development programs represent the first and prime priority of any major involvement in career education from a comprehensive instructional approach.

In addition, career education emphasis should be reflected in the guidance and counseling programs. The Fort Worth project results indicate that guidance, as it is developed through ongoing instructional programs and the various counseling entities of the institution, represents the common thread which may ultimately unite the total school approach and the career education philosophy.

The developmental phase of the Fort Worth project did establish a strong base from which continued expansion and re-identification of needs may develop. The Board of Education of the Fort Worth Public Schools passed a unanimous resolution which supports this position. Too, the Board has approved local funds to develop the second year's operation which hopefully will lead to a system-wide involvement within the next four years.

Conclusions, Implications, and Recommendations: Harlandale

Research and Development Component

The decision to write completely new curriculum guides, based on use of the performance objective approach, beginning with the basic curriculum concept and then through extension and expansion the inclusion and development of career-related materials and concepts, proved to be an educationally profitable move. In writing a complete new guide, a cohesive, logical, and sequential approach to each subject was made possible. Of 49 guides scheduled to be written, 42 were finished, with plans for completion of the remaining seven.

Many teachers not only used the guides as assets in their classroom instruction but also assisted in writing teaching methods for these guides. The guides found their greatest acceptance in the ranks of the younger or less experienced teachers, who welcomed the new approach and the many helpful teaching suggestions. The listing of available audiovisual materials for both career and curriculum was especially helpful to the inexperienced teacher.

Also, teachers seemed to change their attitudes toward the concept of career education. Some who at first rejected career education without reservation eventually began to assist in the creation of guides and to use career education materials. Many, while not using the new guides *in toto*, used some ideas, career concepts, or other portions of guides in their teaching. This may be an important first step.

A final result of the work of the Research and Development Component was to galvanize the entire teaching staff in the district into a new look at their teaching methods and materials. The innovative performance objective mode of guide composition was adopted as a part of the district's curriculum. Since every teacher was exposed to the concepts of career education not once but numerous times, surely the pattern of education in the Harlandale Independent School District will be altered in various ways as the teaching staff increasingly realized the common sense of and the ineluctable demand of the public for career education.

Counseling and Guidance Component

The contribution made by the elementary and middle school counselors was noted by their respective principals, teachers, parents, and children. Their dedication to the objectives of the career education project served as a catalyst for the implementation of the innovative career materials.

At the elementary level it was important to have the services of a counselor, for it is at this level that children are forming good work habits, healthy attitudes, and a respect for the work ethic. Ideally there should be one counselor to each elementary school. Furthermore, a counseling and guidance staff is a "must" to implement career education. Counselors are invaluable in conveying their enthusiasm and drive to teachers as well as students.

Community Involvement Component

Because of the activity of the Community Involvement Component, new relationships were established between the school district and the business community. Businessmen responded readily to the requests of the coordinator for resource speakers and field trips.

Now, more than ever before, local businessmen understand more fully the operations and goals of the Harlandale Independent School District, and the school district has achieved a more concrete knowledge of the demands of business and industry upon its graduates. The lines of communication which were built should continue to grow and complement both the needs of the school and the business community.

A close bond developed between the school district and the Chamber of Commerce, resulting in, among other things, the Chamber's endorsement of the concept of career education.

School patrons and other citizens of the area evinced heartening interest in the program and its goals, and through a number of community presentations were thoroughly informed about the Career Education Project and about the general educational system.

Job Placement and Follow-up Component

As reflected in the placement statistics, the job placement component has more than paid its way, and can continue to do so.

It is apparent from the total number of placements for the period of April, 1972, to March, 1973, that young job seekers in the Harlandale area, both in and out of school, realized the advantages of having a locally situated, student-oriented, and truly concerned job placement coordinator. Counseling with seniors about proper ways to apply for jobs should be continued if these students' current recognition of the coordinator's personal interest in them is to continue.

Good will between employers and the school district has been a fringe benefit of the placement activities. A screening of applicants by the coordinator gave employers more satisfactory employees.

If the overall impact of the career education is to be measured, the planned follow-up activities, utilizing the computer facilities at the Education Service Center, Region XX, must be continued.

The value of the follow-up study will be seen in future applications. Current indications of full-time employment, job choice, and other career data reflect graduates who have had no contact with the career education program, or other students who have been exposed to the program, in various ways, for not more than one year. If the study is continued over a sufficient period of time, the metamorphosis in student job choice, as it is cultivated by an expanding body of career information, will indicate to the school district definite curriculum needs.

Conclusions, Implications, and Recommendations: Houston

Evaluation Component

Conclusions based upon the experimental results are that the implementation of the Occupational Awareness program did not effect changes in the affective and cognitive domains of occupational awareness in terms of the subjects' performance on the HOAI. Three plausible explanations and methodological considerations in the analysis of the results need to be considered:

1. Intra-session history effects,
2. Prior multiple-treatment interference, and
3. Error variance in the measuring instrument (HOAI) itself.

1. The longer the time lapse between pretesting and post-testing, the greater the possibility of intra-session history effects. In the present study nine months elapsed between the pretesting and post-testing. Likewise, in a naturalistic setting, experimental isolation of the control subject is impossible and experimental control of the "regular" curriculum is also impossible. In the control schools, the influence of teachers discussing and presenting activities related to the world of work and the role of community workers, especially in the primary grades would, at least in part, account for the significant gain in total HOAI scores, for the control group of kindergarten subjects.

Additionally, all Houston Independent School District principals were evaluated in terms of the amount of emphasis given to Occupational Awareness in their schools.

2. Prior multiple-treatment interference is likely to occur, whenever multiple treatments are applied to the same respondents, because the effects of prior treatments usually cannot be controlled in a naturalistic setting. In the case of the experimental schools, some had had prior to the pretesting in September, 1972, a programmatical implementation of an Occupational Awareness program for one, two, and three years. Not only is there a problem when prior conditions like this exist in obtaining baseline data with which to compare the post-testing data; but there is a confounding of treatment variables, such that certain effects cannot be distinguished for other effects. Again it is difficult in a naturalistic setting to experimentally isolate the subject, prior to the initiation of the study.

3. Another plausible explanation is the measuring instrument itself. The test developers sought to design items that would measure cognitions and affects which were emergent but not yet firmly established in young children. Therefore, an item was retained after field testing only if 50 percent or fewer of the subjects emitted a correct response to the item. The reasoning was that this difficulty level (50 percent or fewer responding correctly to an item) would allow sufficient ceiling for higher post-test scores even for those children who scored high on the pretest. In order to develop items of this difficulty level (50 percent or fewer responding correctly to an item) a large number of relevant cues had to be removed. Thus, the cues available for the subject to base his discriminations on and then formulate his response choice between the defined correct choice (correct foil) and the distractors (incorrect foil) are extremely subtle and ambiguous. Consequently, when there is an absence or ambiguity of cues available for the subject to base his discriminatory responses upon, random guessing will occur.

For example, the means obtained in the research schools and the normative data cited in the HOAI Test Manual are not functionally significantly different from what would be expected by chance. To illustrate, on the Primary Level test there are 15 items each with three pictures or foils to choose from. If a subject did not have questions (stems) presented or administered to him, but was asked to choose one picture from each group of three pictures, his total correct score that could be expected by chance would be five. Table 16 presents the obtained norm means and the expected-by-chance means for each grade. The reader can discern from this table that the means for the first and second grades derived from the normative data are higher than those of the fourth grade. Likewise, the second grade's mean derived from the normative data is higher than that of the fifth grade. Conversely, in both cases the third, fourth, and fifth grades' means that would be expected by chance are higher than the first and second grades. While there is not a one-to-one correspondence between the items for the first and second grades and the items for the third, fourth, and fifth grades, the obtained results on the HOAI (Primary and Intermediate Levels) are functionally no better than what would be expected by chance.

Congruently, an expected-by-chance mean value for a correct response on each item is $p=.33$. An inspection by grade level indicates that the obtained mean value for each item and across items for each grade is not functionally significantly different from what would be expected by chance. For example, at the third grade level the theoretically expected-by-chance mean value, (based on a 1 in 3 chance of emitting a correct response) summed across items is $p=.33$, and the obtained mean value was $p=.32$ summed across all 17 items. The obtained mean values for each item are distributed not unlike a random variable.

Additionally, the reliability estimates for the total scores using a test-retest design with a lapse of two weeks between the first and second testing sessions yielded reliability correlation coefficients of .3528 for the Primary Level and .6230 for the Intermediate Level (see Table 17). Each obtained score therefore, is composed of 35 percent true variance and 65 percent error variance for the Primary Level HOAI. Also for the Intermediate Level each obtained score is composed of 62 percent true variance and 38 percent error variance, (see Table 18). The experimental design did not allow for the partitioning of the error variance into its sources. Such a partitioning procedure would permit the analysis of error variance into its different components or sources, such as time sampling, content sampling, etc. The above procedure might have shed some light on the sources of the random error variance that was obtained. In summary, a large proportion of the total variance was error variance, due to a lack of test reliability, which increased the derived error terms and thus reduced the power of the test of significance and hence the likelihood of obtaining a significant difference.

Another index of the fact that obtained HOAI scores were not unlike what would be expected by chance, i.e., error variance, was the inter-item correlation coefficient matrix. The inter-item correlation matrix at each grade level was not unlike a correlation matrix derived from a bivariate random sample of error variance. For example, at the fifth grade level, based on the 17 item Intermediate Level HOAI, there are 136 possible correlation coefficients among items. On the basis of chance one would expect 1.4 correlation coefficients of .11 or greater at the .01 probabilty

Table 16

MEANS DERIVED FROM THE NORMATIVE DATA AND MEANS THAT WOULD BE EXPECTED BY CHANCE ON THE PRIMARY AND INTERMEDIATE LEVELS OF THE H O A I FOR GRADES K THROUGH 6

Grade	Means Derived From The Normative Data	Means That Would Be Expected By Chance
K	4.92	5.00
1	5.79	5.00
2	6.61	5.00
3	4.99	5.66
4	5.54	5.66
5	6.28	5.66
6	7.10	5.66

Table 17

PEARSON PRODUCT-MOMENT
(TEST-RETEST) RELIABILITY CORRELATION COEFFICIENTS
FOR THE PRIMARY AND INTERMEDIATE LEVELS
OF THE H O A I

LEVEL	N	r
Primary	278	.3528
Intermediate	414	.6230

Table 18

THE TOTAL VARIANCE FOR EACH SCORE PARTITIONED INTO
TRUE VARIANCE AND ERROR VARIANCE
FOR THE PRIMARY AND INTERMEDIATE LEVELS OF THE HOAI

Level	True Variance	Error Variance
Primary	35.28%	64.72%
Intermediate	62.30%	37.70%

level (df-680). Three correlation coefficients of .11 or greater were obtained, which indicates that the obtained bivariate inter-item correlation coefficient matrix distribution was not significantly different from a bivariate random sample of error variance. Likewise, the inter-item correlation matrix for each grade level was distributed similarly to the above cited example.

In addition, factor analysis of the HOAI items at each grade level yielded for each factor a percent of total factor variance that was only nominal and thus of no functional value. Likewise, the percent of total variance that correlated or the index of communality (h^2) for each grade level ranged from 50.0 to 55.0.

In the future, based upon the process data, an emphasis and high priority might be given to the appropriateness, timing and supply of materials. One of the frequently manifested concerns of teachers was the lack of time during the school day to implement the program. This may or may not be an index of the teachers' interest or motivation for the Occupational Awareness Program. However, the data indicate that only a relatively small number of teachers were consistently resistant to implementation. In any case, it would probably be beneficial in the future to set up a procedure for desensitizing and then positively motivating resistant teachers. An alternative would be to drop these teachers from the Occupational Awareness Program and apply the resources more effectively with the more highly motivated teachers.

Additionally, more time and resources should be applied to the development of the measuring instrument used in the evaluation. The six-month period that was allowed for instrument development prior to the beginning of the research implementation (pretesting) was not a sufficient amount of time. A minimum of two or three years is usually required for instrument development in terms of item development and analysis, norming, reliability and validity estimates. Thus an increase in funds for instrument development would be necessary. Also, in the future, the research design for collecting the process data might be not unlike a quasi-experimental time-series design. This would permit a more thorough tracking of the program development and level of implementation.

APPENDICES

Appendix A

MAJOR MATERIALS DEVELOPED: FORT WORTH

I. HANDBOOKS

A. Middle School Implementation Guide
B. High School Guidance and Counseling Handbook
C. Media Resources Handbook and Supplement (Secondary)
D. Instructional Materials List (Elementary)
E. Career Education Planning Procedures Model Project, K-12
F. Placement Procedures Guide
G. Classroom Guidance Techniques (Elementary)
H. Bulletin Board Ideas (Elementary)

II. CURRICULUM MATERIALS

A. Career Awareness Education Guide, Grades 1-2, Social Studies
B. Career Awareness Education Guide, Grades 3-5, Social Studies
C. Career Opportunities Course Guide, Grade 8
D. Career Opportunities, Mini Course Guide, Grades 9-12
E. Suggested Activities for Career Emphasis for Middle School Science
F. Suggested Activities for Career Emphasis for Middle School Math
G. Suggested Activities for Career Emphasis for Middle School Social Studies
H. Suggested Activities for Career Emphasis for Middle School English
I. Suggested Activities for Career Emphasis for High School Science
J. Suggested Activities for Career Emphasis for High School Math
K. Suggested Activities for Career Emphasis for High School Social Studies
L. Suggested Activities for Career Emphasis for High School English
M. Senior Work Program, Group Orientation Packet
N. Student Packet, Career Opportunities
O. Curriculum Supplements
    1. Career Education Concepts, K-12
    2. Selected Career Education Concepts for Secondary English, Grades 6-12
    3. Selected Career Education Concepts for Secondary Math, Grades 6-12
    4. Selected Career Education Concepts for Secondary Science, Grades 6-12
    5. Selected Career Education Concepts for Secondary Social Studies, Grades 6-12
    6. Suggested Questions for Classroom Discussion, K-12
    7. Suggestions for Teaching-Learning Activities, K-12
    8. Career Activity for English Classes, Looking For A Job, Grades 7-12
    9. Career Games, Compiled List and Suggested Usage, K-12

    10. Career Exploration Map, Grades 6-12
    11. Goal Statements for Career Education, Adapted from Educational Products, Incorporated, K-12
    12. In-service Education Package, K-12
    13. Career Awareness Position Papers, K-12

III. BULLETINS

A. Project Quarterly Reports (May, 1972; June, 1972; October, 1972; December, 1972; March, 1973)
B. Project Final Report
C. Progress Report (August, October, 1972)
D. Quarterly Placement Report

IV. SURVEYS AND STUDIES

A. Study of 1971-72 Elementary Curriculum Guides
B. Community Survey for Resource Speakers, K-5
C. Teacher Involvement Survey and Study, K-5
D. Resource Center Utilization Survey, Grades 6-12
E. Student Evaluation of Career Opportunities Class and Lab, Grade 8
F. Student Evaluation of Senior Work Program Student Orientation, Grade 12
G. Student Evaluation of Career Opportunities Mini Course, Grades 9-12
H. Teacher Attitude Survey, K-12
I. In-service Evaluation Study, K-12
J. Survey and Follow-up Study, 1971-72 Graduates of the Project High Schools
K. Survey of 1973 Graduates Project High Schools
L. Comparison Study 1971-72 vs 1972-73 High School Graduates of Project High Schools
M. Brochures
    1. Career Education Project Brochure, K-12
    2. Suggestions for Resource Speakers, K-12
    3. Vocational Offerings Fort Worth Independent School District (22 Different Titles)

V. FORMS

A. Job Application
B. Senior Career Survey Form
Note: Other project forms found in procedures handbooks

VI. SLIDES AND TRANSPARENCIES

A. Slides
    1. Slide Presentation, Project Story
    2. Slides of Student Activities
    3. Slides of Resource Speakers
    4. Slides of Study Tours
    5. Slides of Project Sites
    6. Slide Presentation, Career Opportunities

B. Transparencies
   1. Why Study Math?, Grades 6-12
   2. How to Get a Job, Grades 6-12
   3. You're Hired, Grades 6-12
   4. Guys and Dolls Looking for Summer Jobs, Grades 6-12
   5. Implementation Model
   6. Needs of Career Education for Elementary School
   7. Goals of Career Awareness
   8. Elements of Career Development

VII. MISCELLANEOUS

A. List of Resource Speakers
B. List of Study Tour Sites
C. Job Descriptions
   1. Elementary Career Counselor
   2. Middle School Career Counselor
   3. High School Career Counselor
   4. Placement Coordinator
D. Purchased Item Inventories (per school)

Appendix B

CURRICULUM GUIDES: HARLANDALE

RESEARCH AND DEVELOPMENT

I. ELEMENTARY

1. Kindergarten - 181 pp.
2. First Grade - 98 pp.
3. Second Grade - 177 pp.
4. Third Grade - 231 pp.
5. Fourth Grade - 216 pp.
6. Music, K-5 - 45 pp.
7. Elementary Methods and Resource Guide, K-5 - 172 pp.

SECONDARY

II. ENGLISH

1. Seventh Grade English - 98 pp.
2. Seventh Grade Reading - 117 pp.
3. Eighth Grade English - 141 pp.
4. Ninth Grade English - 148 pp.

III. MATH

1. Algebra I - 50 pp.
2. Algebra II - 60 pp.
3. Sixth Grade Math - 68 pp.
4. Seventh Grade Math - 66 pp.
5. Eighth Grade Math - 88 pp.
6. Fundamentals of Math I - 66 pp.
7. Fundamentals of Math II - 58 pp.
8. Geometry - 123 pp.
9. Math of Consumer Economics

IV. SCIENCE

1. General Physical Science, ninth grade - 59 pp.
2. Biology I - 131 pp.
3. Biology II - 175 pp.
4. Earth and Life Science, eighth grade - 215 pp.
5. Chemistry I - 125 pp.
6. Physics I - 150 pp.

V. SOCIAL STUDIES

1. Texas History and Geography - 86 pp.
2. American History, to 1865 - 190 pp.
3. American History, 1865 to present - 184 pp.
4. World History Studies - 376 pp.

5. Sociology - 70 pp.
6. American Government - 210 pp.
7. Latin American Studies - 90 pp.
8. Advanced Texas Studies - 200 pp.
9. Economics - 107 pp.
10. World Geography Studies - 240 pp.
11. Mexican American Studies - 90 pp.
12. Advanced Social Science Problems - 160 pp.

VI. SPANISH

1. Spanish I - 139 pp.

VII. JOB PLACEMENT AND FOLLOW-UP

1. Job Placement Booklet - 41 pp.
2. Follow-up Booklet - 16 pp.

VIII. COMMUNITY INVOLVEMENT

1. Community Involvement Guide - 55 pp.

Appendix C

CURRICULUM GUIDES: HOUSTON

I. OCCUPATIONAL ORIENTATION, PART I

- A. Overview
- B. Introduction
- C. Business and Office Occupations
- D. Marketing and Distribution Occupations
- E. Communication and Media Occupations

II. OCCUPATIONAL ORIENTATION, PART II

- A. Construction Occupations
- B. Manufacturing Occupations
- C. Transportation Occupations
- D. Agri-Business and Natural Resource Occupations
- E. Marine Science Occupations

III. CAREER ORIENTATION, PART III

- A. Environmental Control Occupations
- B. Public Service Occupations
- C. Health Occupations
- D. Hospitality and Recreation Occupations
- E. Personal Services Occupations

IV. CAREER ORIENTATION, PART IV

- A. Fine Arts and Humanities Occupations
- B. Consumer and Homemaking-Related Occupations
- C. Self-Analysis
- D. Evaluation

Appendix D

THIRD-PARTY EVALUATION REPORT

EVALUATION OF CAREER EDUCATION
PROJECTS IN TEXAS:
HOUSTON, HARLANDALE, AND FORT WORTH
INDEPENDENT SCHOOL DISTRICTS

Submitted to
The Division of Occupational Research and Development
of the
Texas Education Agency
Under Contract 38221

by

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CHAPTER I

INTRODUCTION

American education is today undergoing a major shift in direction. At its core is a new view of education's function. In every section of the country, a significant number of schools and colleges are seeking to reorient and broaden their purposes. Their common goal is to respond to the student's specific, immediate educational needs in a manner that serves his long-term aspirations for a satisfying and meaningful life after his schooling is ended. This is career education, a concept which recognizes that learning is more than an intellectual exercise--that in stretching people's minds and honing their sense of values, the schools and colleges have the further obligation of preparing them to launch successful working careers.[1]

Three factors will distinguish career education from traditional vocational education: it will be offered as part of the curriculum of all students; it will permeate the entire spectrum of a youngster's education, from kindergarten through high school; and it will offer a much wider range of occupational choices than are now available in regular vocational programs.[2]

A program designed for elementary school should be developmental--based upon a series of concepts, graduated according to difficulty, and upon the needs and abilities of the children. It should assist students to become alert to people who work and to become curious about careers and ready for the investigation of careers which is to occur during the middle school years. Awareness of the world of work is considered to be the overall goal of career education in the elementary school.[3]

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[1] American Education, September-October 1972, p. 25.

[2] Before thirty-third session of the International Conference on Education, Geneva, Switzerland, September 15-23, 1971. "Career Education" Sidney P. Marland, Jr., U. S. Commissioner of Education.

Investigation is the primary goal for career education in the middle schools. A middle school should provide all students with appropriate opportunities to observe and study in a systematic manner a variety of careers. These investigations by students should build upon the awareness of the world of work that is begun and sequentially developed in the kindergarten and elementary grades. The investigation should also serve as a bridge to the high school years of preparation for employment.[4]

A high school program of career education rests upon the cumulative experiences of the student developed during his elementary and middle school years in the same way that other high school programs such as science and mathematics depend upon foundations laid in the lower grades. The awareness and investigative objectives which received emphasis in the elementary and middle school program should continue to be implemented in the high school on a plane suited to the increasing maturation and understanding of the students. That is to say, the curriculum should include concepts that would not have been understood by younger children. Opportunities for investigating additional careers and familiar concepts in more depth should also be worked into the high school curriculum in much the same way they are included in the middle school curriculum.[5]

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[3] A Tentative Framework for Developing Comprehensive K-12 Career Education. Texas Education Agency, Austin, Texas, April, 1972, p. 9.

[4] Ibid. p. 11.

[5] Ibid. p. 14.

Determining the success of career education depends upon evaluating its processes and its effect on participants. Questions should be raised about the manner in which career education is implemented and operated, and information will be needed about the performance of participants. What changes in the behavior of participants are sought? What kinds of evidence are administrators willing to accept that the learner's behavior has changed? To what extent are stated objectives being met?

These and other questions should be raised so that kinds and types of information needed for evaluation can be identified. Sources of data should be identified and appropriate data gathering instruments, when needed, should be prepared. Plans for the analysis of collected data and for the utilization of findings to improve and to redirect programs are vital parts of the evaluation design.[6]

Many good programs or solutions in education fail, not because the solution was poor, but because it was poorly implemented. Part of the job of evaluation therefore is to determine how well the implementation phase was planned and carried out. The plan itself serves as a basis for evaluation. It automatically carries with it some deadlines for the accomplishment of certain activities. It is the job of evaluation to reach back into the values and facts compiled; into the performance requirements, mission milestones, and functions identified; and into the solution descriptions (model) and put these into usable form for monitoring the execution of the plan and assessing final outcomes.[7]

Many attempts at program evaluation have met with limited success because planning for the evaluation process was not done when the program was begun. In some cases this meant that goals were not as clearly developed as they should have been. When goals are being established, at the outset of the program, three important questions relating to future evaluation should be asked with regard to each goal:

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[6] Ibid. p. 8.

[7] Guidelines for On-Site Evaluation of Title III Projects for Operation SPREAD. Worldwide Education and Research Institute, Salt Lake City, October, 1971, p. 6.

1. What means will be used to measure progress toward this goal at the time of evaluation?
2. What information will be needed at that time if a progress measurement is to be made?
3. What data will need to be collected and maintained and what steps taken, from the outset of the program, to assure adequate information at a later time?

For evaluation purposes it is not enough to set up vague, general goals. Standards of accomplishment need to be agreed upon in advance and stated with precision. If the evaluation process is built into the program at the beginning, evaluation is more easily accomplished and produces more confident results when the time for it arrives.[8]

On January 1, 1972, the Texas Education Agency, through the Division of Occupational Research and Development, funded three Vocational Research and Development Projects focused on the establishment of comprehensive career education model programs in the Houston Independent School District, Harlandale Independent School District (San Antonio), and Fort Worth Independent School District. These Texas projects were funded as part of the national network of career education model programs made possible through an allocation of $9,000,000 from the U. S. Commissioner of Education's discretionary funds.

The national guidelines for these Research and Development Projects require that provisions be made for a third party evaluation "to assess the effectiveness of each project component, as well as to assess the overall value and success of the total project."[9]

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[8] Organization and Operation of a Local Program for Vocational Education. New York State University, Buffalo, Western New York School Study Council. 1968.

The Center for Human Resources, University of Houston, proposed to provide evaluation of the three projects named above concerning their 18-month funding period. Although all three programs have the same goal, "establishing a meaningful comprehensive, well-developed career education program with a strong guidance and counseling component," each of the proposals from the local school districts is unique, reflecting their program developmental differences. The overall evaluation of all three programs would analyze the impact on those students involved in the program; i.e., "student outcomes in relation to the treatments attempted." However, since each is unique, the evaluation design of the Center for Human Resources is presented accordingly: one for each of the local districts involved.

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[9] All quotes from U. S. Office of Education Policy Paper AVTE-V72-1 in the Proposal for Evaluation of Career Education Programs in Texas submitted to the Texas Education Agency by the Center for Human Resources, University of Houston.

CHAPTER II

DESCRIPTION OF PROPOSED CAREER EDUCATION ACTIVITIES

HOUSTON INDEPENDENT SCHOOL DISTRICT (HISD)

The Houston Independent School District, located in Harris County, has an enrollment of 231,412 students. The district has 170 elementary schools and 56 secondary schools, employing approximately 11,000 teachers and supportive personnel. The student ethnic population of HISD is 86,468 Blacks; 35,973 Spanish surnamed; 107,839 Anglos; 220 American Indians; and 912 Orientals.

The Membership Distribution Chart of the Occupational Awareness Program as of October 1972 lists 37 elementary schools with 28,128 students and 966 teachers participating voluntarily in career education. An ethnic breakdown of school population shows 9,428 Blacks; 8 American Indians; 61 Orientals; 4,009 Spanish surnamed; and 14,630 Anglo students involved in career education in HISD.

A proposal submitted by HISD to Mr. John Guemple, Associate Commissioner for Occupational Education and Technology of the Texas Education Agency, on October 7, 1971, presents a display of the ongoing vocational education programs--317 vocational units in the 229 schools in HISD. Along with these regular programs, the district was conducting the following exemplary programs: Environmental Technology, Vocational Training for persons with special needs (EMR), Occupational Awareness for K-6, and Occupational Orientation in the middle schools.

As stated in the document cited above, the major focus of the proposal would be to complete development of the Occupational Awareness Program materials and to determine the effectiveness of such a programmatic effort through a comprehensive research design.

Of the three programs evaluated, HISD's is the most programatically advanced, as they already had a career development program in operation prior to funding of the present proposal. The HISD proposal was a well designed research effort to evaluate their ongoing career development program at the elementary level and to develop curriculum materials at the secondary (middle school) level.

The approach by the Center for Human Resources to the external evaluation of career education in the Houston Independent School District was to verify implementation of the program and to survey their research procedures and results. This evaluation covered each individual component of HISD's program--elementary, middle school, guidance and counseling, and research and development--as well as an overall look at all components.

Elementary Component

The Occupational Awareness Program began its second year of career development in 1971 with 37 elementary schools in the district participating. Instruction was carried on in conjunction with the social studies curriculum. Special coordinators were each assigned several schools to provide assistance, support, and demonstration services to the elementary teacher in the use of career development materials. Materials consisting of lesson plans, resource material, methodology, and instructional media have been printed and used.

The need to prepare for expansion to all 170 elementary schools of HISD by September 1973 promoted the request for an evaluation of the effectiveness in producing the desired attitudinal changes. The research and development effort would focus on two phases of the ongoing Career Development Program: development of criterion performance tests on teaching materials and affective changes in children in the program.

During the period January 1972 to June 1972, all materials currently used in teaching career awareness would be systematically sequenced for class presentation. Performance tests would be developed for each instructional unit. The tests would measure both cognitive (knowledge) and affective (receiving and responding) dimensions of the unit. All materials and tests would be tried out on subjects other than the research group. Final analysis of all tests and sequence of units would be completed by September 1, 1972 for introduction into the research phase.

Test developments for the research phase would focus primarily on the affective changes in children exposed to the program. Instruments aimed at measuring the child's self concept in relation to school, teachers, and peers would be administered on a pre and post basis in September 1972 and April 1973. These instruments would be developed to measure an expanded self concept or an awareness of self in the world of work. Such instruments would tap areas such as valuing work, pride in work, and peer respect and work. Two levels of such an instrument would be developed--primary and intermediate. Instrument development would begin in January, 1972 and validation would be completed by September, 1972. Other dimensions such as absence rates, tardiness, discipline, etc., would be included in the analysis of the data.

The Child Behavior Checklist would be administered to teachers in the research sample. The analysis of these data should yield information relevant to teacher attitudes and effectiveness in teaching career awareness components.

The research sample would consist of approximately 3,500 subjects. Four teachers from each of the 37 buildings would be selected by using a table of random numbers. Both teachers and students of the selected teachers would constitute the research sample. Adequate control samples from each grade level would be selected randomly for comparative purposes.

Elementary Component Evaluation Design. Evaluation of this unit by the Center for Human Resources was to be accomplished through a minimum of two site visits to each of the 37 elementary schools involved. Site visitations included observation of class sessions, informal interviews with teachers and students, and interviews with program staff and administrators (both at the local school level and in central administration). Research procedures and methodology were altered at the completion of the first round of visits to permit a more comprehensive evaluation of program components by using instruments developed to measure attitudes and knowledge of implementation progress by administrators, teachers, and counselors randomly selected. The schools and teachers so selected--Love, 14 teachers; Almeda, 13 teachers; Roberts, 16 teachers; and Emerson, 15 teachers--were interviewed on a pre and post basis in November, 1972 and April, 1973. A minimum of three other visits were made to each site for purposes of observing testing procedures, monitoring activities, and activities of the Occupational Awareness Consultants.

Middle School Component

The 1971 career education efforts at the middle school level included the provision of elective occupational orientation courses in 9 middle schools. These courses included 13 teachers and 1,020 students. The objectives of the occupational orientation program are to assist students in discovering their own interests, in developing attitudes about the world of work, and in investigating occupations.

Material development began during the 1971-72 school year. The materials were to be tested on students and teachers in the 9 middle schools already operating the occupational orientation courses during the remainder of the 1971-72 school year and during the 1972-73 school year. Careful measurement of student outcomes in relation to the curriculum treatments attempted were to be emphasized, including pre- and post-tests to evaluate student performance. By June of 1973, a package of tested curriculum materials for the occupational orientation program would be available for use in expanding the program to all junior high schools.

Middle School Evaluation Design. The Center proposal suggested that a minimum of two site visits to each of the 9 junior high schools involved in career education implementation activities would be made. During the evaluation period, 11 junior high schools were visited where 13 teachers and administrators were interviewed, and observations were made of the manner in which the materials produced by the curriculum coordinator were being used. The schools visited included Black, Edison, Fondren, Henry, Jackson, Johnston, McReynolds, Miller, Ryan, E. O. Smith, and Thomas. A complete review of all the materials produced by the curriculum coordinator was an ongoing activity in the evaluation of this component.

Guidance and Counseling Component

Evaluation of this component was accomplished through interviews with the Occupational Awareness Consultants, elementary teachers, and counselors regarding developed materials and inservice training.

Research & Development Component

During the period January, 1972 to May, 1972 a scope and sequence design was devised by the research staff in conjunction with the school consultant staff. The new materials consist of fifteen career development concepts applicable to grades K-6, grade level behavioral objectives, and teaching activities easily interfaced into the regular school curriculum. A survey of teachers in the pilot schools provided suggestions for curriculum guide revision to promote maximum use of career development materials.

Based on the scope and sequence written in behavioral terms, the development of criterion referenced tests to measure cognitive and affective changes in children was initiated. Preliminary instruments, primary (K-2) and intermediate (3-6) forms, were tested in three schools with a broad range of student populations to determine by item analysis potentially acceptable items. Each instrument consists of two forms. Twenty-three orally administered questions, each of which is accompanied by three alternative picture choices, comprise each form. It was reasoned that in order to overcome the inability to read at lower grades and the great variance of reading ability in the upper grades, picture alternatives would furnish the most easily administered instrument. Revised test forms consisted of 24 items, each related to one of the 15 scope and sequence concepts. All items on the final test had undergone item analysis using a wide range of student populations (N=400).

Research & Development Component Evaluation Design. Research procedures were surveyed for validity and scheduling in the following areas:

1. Systematic sequencing for class presentation of materials.
2. Development of performance tests for each instructional unit.
3. Field testing of instruments.
4. Final test analysis.
5. Sample determination.
6. Pre- and post-testing.

7. Development of an instrument to measure awareness of self in the world of work at two levels--primary and intermediate.

8. Data gathering of dimensions other than test results.

9. Child Behavior Checklist administered to teachers in sample, and

10. Data analysis.

Overall Project Evaluation of HISD

The value and success of the total project was assessed on the basis of the research results (through data analysis), through observation of the components of the programs, through the comments and opinions of those involved in the program, and through quantitative information regarding student field trips and inservice meetings. In addition, special attention was focused on the continuity between program components to assess the transition of students from each grade level.

HARLANDALE INDEPENDENT SCHOOL DISTRICT (SAN ANTONIO)

The Harlandale Independent School District is one of 17 school districts in the San Antonio metropolitan area. The district covers 19 square miles and includes families from low to middle socioeconomic status. The student population of 19,173 includes 12,846 (67 percent) Spanish surnamed; 6,289 (32.8 percent) Anglos and, 38 (.2 percent) Blacks.

The Harlandale public schools have offered strong high school programs designed to provide job preparation in a wide variety of occupational areas. These programs have included extensive and varied cooperative educational opportunities. In recent years, considerable progress has been made in career orientation and exploration.

This district's proposal outlines a systemwide developmental plan for career education to be operated in all schools in the district. The developmental stages were clearly presented in the district's detailed proposal, and the evaluation of this program utilized the Harlandale proposal against which to measure the developmental progress of the program. On-site visits were made to the Harlandale Independent School District to conduct this evaluation. These visits were made at approximately two month intervals and encompassed a total of 34 school days. Components included in the program are research and development, guidance and counseling, placement and follow-up, and community involvement.

Research and Development (Elementary) Component

The research and curriculum development component has a threefold purpose:

1. Identification of the occupational relevance of each subject-matter component at each grade level in the total curriculum and compilation of such data into an organized body of indexed resource career development material.

2. Compilation, organization, and development of a sequential series of curriculum guides to assure incorporation of career development into all phases of classroom activities.

3. Development of a comprehensive inservice training program to assist teachers in the most effective implementation of career development into the total educational program.

According to the Harlandale proposal, the stated purposes were to be accomplished under the guidance of a project director by a staff of research coordinators, one from each major curriculum division, assisted by a task force of carefully selected teachers.

Although the curriculum development phase of the project had been under way for two years, there was a recognized need for further organization and refinement of curriculum guides and materials. In some subject matter disciplines, no teachers' guides existed, and those elementary guides which were available needed extensive revision to embrace career education concepts.

The following objectives were established for research and development activities at the elementary level:

1. Analyze the instructional content of each course to identify career development relevance for each concept and compile the resulting data as a resource reference for use by teachers.
2. Plan and develop effective methods of presenting career development materials within each class.
3. Develop an intensive and comprehensive program for training teachers in the methods of integrating career development into the total program of learning activities.
4. Organize and conduct training sessions for all teachers.
5. Develop and conduct a program of continuous evaluation and revision to assure that both material and methods are kept up to date.
6. Involve all instructional personnel actively in career development.
7. Provide through accumulation, development, revision, and organization of occupational information instructional material, an adequate resource of aid suitable for each grade level.
8. Develop a sequential series of guides for the use of career development instructional materials in each grade level, which will include:
    a. Goals for each grade.
    b. Suggested strategies for accomplishment of goals.
    c. Activities appropriate for the maturity of students.
    d. A compilation of resource persons, material and instructional aids.

9. Guides reproduced and distributed to all teachers.

10. Inservice workshops organized for all teachers to assist them in the use of the study guide for the implementation of career development experiences in their classes.

During the year 1972-73, the career education program would be operated in all 22 schools in the district. Careful pre-test and post-test instruments would be used to assess the effectiveness of the various treatments in terms of student outcomes. At the end of the 1972-73 school year, the research analysts and curriculum supervisors would analyze the results, and recommendations for revision and refinement of the program for the following year made.

Elementary Component Evaluation Design. Evaluation of this component was made during the scheduled visits to the district, with visits to each of the 15 elementary schools participating in the program with four being randomly selected for indepth evaluation--Collier, Gerald, Kingsborough, and Stonewall. Progress was measured against the proposal design and stated timetable through interviews with the four research specialists, members of the teacher task force and curriculum staff, and program coordinators and administrators. In addition, the tests developed for use in pre-testing and post-testing were reviewed.

Guidance and Counseling Component

The middle schools which comprise the project site --Harlandale and Southcross--are staffed with a counselor on each campus. An additional counselor was to be employed in each school site whose primary responsibility would be that of furthering the career development theme as an integral part of the existing program.

At the elementary level, four counselors would be assigned on an itinerant basis to the fifteen schools. These counselors would work closely with the elementary guidance counselor to articulate a familiarization with the career development theory.

Activities would be developed, organized, and activated in cooperation with all administrative, supervisory, guidance, and instructional personnel, so as to provide both group and individual guidance for students as they study, investigate, explore, choose, and prepare for career goals.

Counselors would have the responsibility of developing, organizing, and implementing a program of guidance appropriate for the maturity level of the students. Individual and group guidance beyond the ability of the teachers would be provided as needed by the counselor. All aspects of child development were to be included.

The model program would have the following characteristics:

1. Define guidance criteria in terms of student behavioral objectives.
2. Stress program objectives which are realistic possibilities within the resources of the participating schools.
3. Provide for corrective feedback based upon evaluation of the achievements of the program.
4. Provide for adequate inservice training for counseling and guidance staff, teachers, administrators, and community.

Guidance and Counseling Evaluation Design. This component was monitored against the district's articulated model program of guidance and counseling at grade levels one through eight, using the characteristics itemized in the proposal design. Additionally, interviews were held with the program counselors, added to further the career development theme as an integral part of the program, as well as the middle school counselors, the elementary level counselors,and program administrators.

Placement and Follow-Up Component

Satisfactory job placement is the ultimate objective of occupational education. Thus, the job placement service was to provide assistance to every student exiting from the public school, either by graduation or by withdrawal prior to graduation. This assistance would include an opportunity to enter gainful employment in some field for which he had the training and qualifications or additional training opportunities as needed to assure employability. This service would also assist each student placed in employment to make the transitional adjustment from a school environment to his occupational career.

The follow-up phase would provide evaluation not only of the placement service, but of the total career development program. Data would be available through which every student in grades 8 through 12, plus all who had exited from the school during the past five years, could be traced through each stage of development. Such analysis would be used to determine the relative effectiveness of each phase of the total program. Contracted data processing would provide analysis and evaluative statistical data.

Placement Component Evaluation Design. The placement component was evaluated on the basis of job placements made to date (taking into consideration the atmosphere of the labor market in the San Antonio area), employer contacts and cooperation, and the working relationship between the liaison component and business and industrial organizations. This information was obtained through a review of placement procedures and records as well as interviews with representatives of the agencies named above and representatives from industry.

Community Involvement Component (Liaison)

The community involvement component was designed to provide a functional bridge between the school, the community, and business and industry. The coordinator was to interpret the educational career development program to businessmen and industry leaders and seek their assistance and cooperation in making adjustments in the program. By use of films, lectures, conferences, inservice training, on-the-job training, and informational materials, the coordinator would assist in establishing rapport between the project components and the leaders of business and industry.

In addition to these activities, the coordinator would provide an informational program which would encompass parent groups, social clubs, community organizations, and other interested groups located within the city. Effort was to be made by this component to involve the total community by means of workshops and transmission of information about the career development program and its progress.

Community Involvement Evaluation Design. The effectiveness of this component was assessed through the involvement of business and industry in the career education program. Development of and reaction to the information program in working with parent groups, social clubs, community organizations, and other interested groups was also reviewed, as was the working relationship of this component within the total school system.

Overall Project Evaluation of Harlandale ISD

The value and success of the total project was assessed on the basis of the research results (through data analysis of pre- and post-tests, as well as other data collected by the program evaluators), through observation of the components of the program, through the comments and opinions of those involved in the program (including student participants), through evidence of the comprehensiveness of the program (each subject area involved), and quantitative information regarding student field trips and inservice meetings. In addition, special attention was focused on the continuity between program components.

FORT WORTH INDEPENDENT SCHOOL DISTRICT

Fort Worth is an industrial city with a population of approximately 400,000, with minority groups composing 35 percent of the population. Fort Worth has a substantial proportion of middle income families; however, 18.44 percent of the families have incomes below the poverty level. The city's economy has recently shifted from one heavily involved with the aerospace industry to one which is more diversified and includes a variety of types of industry as well as distribution and service occupations.

The local school district in Fort Worth enrolls approximately 85,000 students in grades kindergarten through 12. However, for the purposes of the career education project, a complex of schools enrolling approximately 7,000 students had been identified as the project site. Data on the complex of schools which comprise the project site are provided in the table below:

Level	# of schools	# of teachers	# of counselors	# of students
Elementary	4	60	1/2	1700
Middle School	2	60	2	1775
High School	2	112	4	3800
TOTAL	8	248	6 1/2	7275

The Fort Worth Independent School District has for many years maintained an effective program in grades 10 through 12 which prepares students for gainful employment. In recent years, the program was expanded to include programs in grades 6 through 12, and the enrollment has almost tripled in numbers of program offerings, program units, and persons served. Vocational programs are offered at all secondary schools, one occupational school for the handicapped, and 14 elementary schools--13 with special education.

The Fort Worth Public Schools began the Career Education Project, K-12, on January 3, 1972. At that time a plan was established to divide the project into two major segments: the initial planning phase and the implementation phase. Generally the planning phase was to function from January 3, 1972 to August 24, 1972. However, full staffing of the project did not occur until March 20, 1972.

The purpose of the planning phase was to establish an initial set of objectives and processes for each component of the project which in one year could create a strong base for a total career education involvement in the Fort Worth Public Schools. A key emphasis the first year was to initiate an attitude of acceptance and importance for career education in the total program on the part of the teachers, counselors, administrators, parents, business community and the students.

In order to implement total career education involvement, the district identified the following tasks:

1. Develop and implement a program at the elementary school level designed to increase career awareness of students in terms of the many options open to them in the world of work, to develop favorable attitudes toward the dignity of work, and to develop awareness of personal satisfaction derived from successful performance in an occupation.
2. Redirect the middle school curriculum to place renewed emphasis on career orientation and meaningful exploratory experiences for students through all course offerings.
3. Provide at the high school level in-depth career exploration and specialization opportunities.
4. Improve the guidance and counseling program at each level of instruction with counseling focusing on success probability.

5. Establish a service to insure placement of all exiting students either in a job, a post-secondary occupational program, or a baccalaureate program.

The Fort Worth project is a comprehensive, developmental model for a career awareness program at all levels in selected school sites. It includes elementary, middle school, and high school components as well as guidance and counseling and placement components. As their proposal states that the district's Department of Research would conduct an in-house evaluation during the 18-month program period, the Center evaluator worked closely with assigned personnel for the duration of the contract period. Visits were made to all of the schools designated as project sites--a total of 14 days being spent in Fort Worth Independent School District evaluation activities.

Elementary Component

Implementation of the planning phase of career education at the elementary school level was determined by the activities stated in the Proposal for a Career Education Program Model submitted to the Texas Education Agency by Julius Truelson, Superintendent, and R. M. McAbee, Associate Assistant Superintendent, of the Fort Worth Independent School District. These activities included:

1. Conduct an extensive investigation of research-related literature and ongoing elementary school career education projects, and identify promising approaches, techniques, and materials for increasing career awareness.
2. Determine a means of incorporating self-awareness and interpersonal relationship components in the total program.
3. Select a committee of successful teachers from each grade level, K-5, and human growth and development teachers to explore revisions of the curriculum in order to incorporate career awareness experiences and self-development experiences and redirect the instructional program based on these concepts.

   a. Committee will function on a part-time basis during the Spring, 1972 and will experiment to a limited extent within individual classrooms with a variety of techniques and materials.

   b. Committee will work full-time during June and July, 1972 to structure a complete program K-5.

4. Develop inservice education to introduce teachers to the basic concepts of the total program and acquaint them with specific techniques and materials to be used at each grade level.

Four elementary schools were selected as project sites for this component: Stephen F. Austin, James E. Guinn, Atwood McDonald, and Meadowbrook. In all, approximately 60 teachers and 1700 students would be involved.

The five major goals or objectives of career education in the elementary schools were to help the students:

1. To develop a positive self-image.
2. To become aware that many variables affect career choices.
3. To become aware that school helps prepare for the future.
4. To become aware of the world of work.
5. To become aware that adaptation to the environment is necessary and affects career choice.

Elementary Component Evaluation Design. Evaluation of this component was made during the scheduled visits to the four elementary schools and through discussions with the district personnel assigned to implement this component in the Fort Worth Independent School District. Progress was measured against the proposal design and stated timetable through interviews with the teacher committee members, other teachers involved with the developed materials, and program administrators. Information was also obtained as to the materials found through the literature search, and their relevancy to the district.

Middle School Component

The following tasks were outlined in the document cited above for the planning phase of the middle school component:

1. Conduct an extensive investigation of research-related literature and ongoing middle school career education projects.
2. Identify promising approaches, techniques, and materials to aid students in occupational investigation and self-awareness.
3. Select a committee composed of vocational-industrial education teachers and academic teachers to design a program which incorporates occupational investigation and self-awareness in the instructional program.
4. Involve all areas of instruction in the project; i.e., music, art, mathematics, social studies, homemaking, industrial arts, science, language arts, and physical education.
5. Committee will design a required course in occupational investigation for all students in grade six.
6. Committee will function on part-time basis in Spring of 1972 in cooperation with Career Awareness Coordinator in developing materials and in field testing materials and techniques.
7. Committee will also investigate means by which existing laboratories for different vocational-industrial education programs can be used more effectively for in-depth occupational investigation.
8. Structure entire program during June and July, 1972.
9. Conduct one week of inservice education to acquaint all teachers with specific techniques and materials to be used in career education programs during academic year, 1972-73.

The middle school component of career education would provide input and continuity to the program which was begun in the elementary school component. In order to accomplish this it would be necessary to redirect the middle school curriculum somewhat to place a greater emphasis on career orientation and meaningful exploratory experiences for all students. To achieve the above results a multi-phased approach would be used in the middle school. This approach would include:

1. Organizing an occupations course for specific career orientation and personal awareness.

2. Assisting classroom teachers to place the desired emphasis on career information related to their specific class.

3. Providing a resource center for use by students and teachers.

4. Informing parents of the desired goals and outcomes of career education.

5. Seeking the support of the business and industrial community in providing for appropriate study tours and occupational information and resource speakers.

Two middle schools were selected as project sites for this component: William James and Leonard, with approximately 60 teachers and 1700 students involved.

Middle School Component Evaluation Design. In this component, also, progress was measured against the proposal design and timing plan. Interviews were held with the teacher committee members, other teachers, and program administrators to determine opinions of effectiveness. Visits were made to both middle schools.

High School Component

In the career education high school component, there was to be an organized program so structured that some students would intelligently progress in the direction of a cluster of occupations while other students actually might choose a career. Thus, the primary goal of career education in this component was to provide, at the high school level, in-depth career exploration and specialization opportunities.

All secondary consultants were to cooperate with the Career Awareness Coordinator in coordinating the total career education program, 9-12. The Associate Assistant Superintendent for Vocational-Industrial Education and the staff for this division of the school system would work closely with consultants for the academic disciplines, counselors, administrators, teachers, students, and parents to interpret the career education concept, and to redirect the attitude toward career education.

The activities listed in the planning phase for the high school component included:

1. Conduct an extensive investigation of research-related literature and ongoing high school career education projects.
2. Appoint a committee composed of teachers representing the various disciplines to work with the vocational-industrial education staff, the project staff, and the secondary consultants in developing techniques and materials. This committee will function on part-time basis in Spring of 1972 to explore materials and techniques and will work with consultants during June and July, 1972 to refine materials and techniques.
3. Conduct inservice education on the building level at each high school site to introduce teachers to the specific techniques and materials used on different levels of instruction in each participating discipline.
4. Establish and staff a career resource center at each site for use by students, parents, and other staff members.
5. Conduct group counseling and individual counseling periodically.
6. Give students the opportunity to observe individuals working in different occupational clusters through study tours.
7. Give students opportunities to observe career education programs in other schools with the option to enroll in these programs if the courses are a part of the student's career preparation plan.

It was visualized that the career education program at the high school level would result in experiences for the student so that he would become more confident of his abilities, more satisfied with his accomplishments, more willing to be challenged, and more capable of understanding the necessity for change in a fast changing technological world. The anticipated outcomes for the career education program which had reached the implementation phase are developed in the following objectives:

1. To develop a realistic attitude toward the dignity of all work and workers.
2. To acquaint students with the major occupational fields.
3. To develop attitudes of respect for and cooperation with employers and fellow employees.
4. To provide special information to students regarding specific employment.
5. To develop understanding of the need for continuing education or training in the various career areas.
6. To develop a continuing program of research and planning.
7. To assist in the development of a job placement and follow-up program.
8. To help students acquire occupational information by use of material available in the resource center.
9. To give students an opportunity to reflect on their goals and make adjustments through individual counseling.
10. To work with teachers in acquiring resource speakers.
11. To have means of evaluating materials in resource center.
12. To work with placement officer in acquiring students for full or part-time employment in their career interests.
13. To work with employers, community agencies, and organizations committed to furthering the welfare of the students.
14. To study effectiveness of counseling contacts, and to arrange for follow-up.

Two high schools were selected for the project sites: Arlington Heights and Trimble Technical. Approximately 112 teachers and 3800 students were to be involved in this component of the project.

High School Component Evaluation Design. The two high schools in this component were visited during the scheduled trips. In addition to interviews with the members of the teacher committee, other teachers, vocational counselors, program coordinators, and administrators, the career resource centers were visited to determine their acceptance and use (in quantitative terms, if possible). Student field trips to other career awareness programs in other schools could also be quantified, and qualified by the student reaction to these trips.

Guidance and Counseling Proposal Component

The high school has the responsibility to continue to develop an educational program that will help students accumulate knowledge and information that is unbiased and realistic about the world of work. There was to be a strong guidance service where the basic function would be to help students understand themselves better, to encourage proper attitudes, and to accept the responsibility of selecting a career.

In contemplating the proposal for a career education program in the Fort Worth Independent School District, there was recognition of an apparent need to improve the guidance and counseling program at each level of instruction with counseling focusing on success probability. The following proposed activities were a result of that recognition:

1. Assign a vocational counselor to each high school, one to the two middle schools, and one to the four elementary schools.

2. Provide three weeks of inservice education in July and August, 1972 which includes familiarization with the career development theory, exploration of the world of work and opportunities to gain an appreciation for the dignity of work at whatever level of endeavor. Counselors will be oriented to an emphasis on the responsibility of the school toward placing each student exiting from the system in a job, in a post-secondary occupational program, or in a baccalaureate program.

3. A complete and articulated model program of guidance and counseling will be conducted at all grade levels, K-12. The model program will have the following characteristics:

    a. core based on systems concept, particularly those presently associated with evaluation and change process models in education;

b. guidance criteria in terms of student behavioral objectives defined;

c. program objectives which are realistic possibilities within the resources of the participating schools will be stressed;

d. corrective feedback based on evaluation of program achievements will be provided.

Since the occupational outlook is changing constantly and many future occupations have not yet evolved, a student having some years of preparation ahead might elect a broad curriculum in a general area of interest such as science, humanities, or arts. Such a realization would emphasize the need for flexible planning for the choice of a major interest area, as well as identifying related occupations, to which these interest and abilities might lead. The further he progressed in school, the better the opportunity for a student to select his major field of interest. The more familiar he is with the areas of work, the better prepared he will be to plan his future.

The expected outcomes for career education are that every student will develop competencies necessary for living and making a living, and that he will develop appropriate attitudes toward the world of work and his fellow workers. To fulfill the stated objectives the following processes should be utilized:

1. Individual and group counseling.
2. Team effort of the guidance and counseling staff.
3. Establishing a resource center in each high school that will contain audio-visual materials.
4. Utilizing hand-out materials.
5. Encouraging teachers to relate their subject to the world of work.
6. Assisting teachers in organizing study tours to business and industry to observe a true occupational picture.
7. Helping students become aware of possibilities of continued study in chosen career areas.

8. Making a survey of job needs in the community.
9. Arranging talks and interviews that concern job entry and advancement.
10. Utilizing the various advertising methods to make businesses, students, and teachers aware of the career education program.
11. Working with the placement officer for job placement for students.
12. Establishing permanent records on exiting students.

Guidance and Counseling Component Evaluation Design. This component was monitored against the district's articulated model program and the characteristics itemized in the proposal.

Placement Component

The placement component in the high school project study would be an extension of the guidance and counseling component. It would aid in bringing together employers and students who are seeking employment. Students who plan to further their education after graduation would be assisted in selecting a vocational school or a college of their choice. The placement service would work in cooperation with the guidance counselors, cooperative education teacher-coordinators, vocational teachers, Chamber of Commerce, Texas Employment Commission, and other civic, and private agencies.

A survey would be conducted to determine potential employers for students who wish to work part-time while continuing in school, for students who may withdraw from school and work full-time, and for students who graduate from grade 12 and desire employment. A comprehensive file would be maintained on current job opportunities for part-time and full-time employment. The placement service would make an extensive effort to insure that the highest possible percentage of students graduating from grade 12 are placed, either in a job or in further education.

The placement service was to function through the 1972-73 academic year. All components of the project were to be designed so as to emphasize reliable measurement of student outcomes in relation to the treatments attempted and to provide for appropriate program revisions where apparently there were needed changes.

Placement Component Evaluation Design. This design component stated that visits would be made to the placement services at each of the two high schools to determine their success in staffing the offices and in obtaining cooperation with the guidance counselors, cooperative education teacher-coordinators, vocational teachers, the Chamber of Commerce, and the Texas Employment Commission. In addition, the results of their spring survey would be reviewed as well as their placement efforts in June, 1972.

Overall Program Evaluation

Accurate records would be maintained with regard to exact methods and procedures which were utilized and the associated costs, in order to yield data essential to judging the potential transportability of successful components.

At both the elementary and middle school levels, reliable and valid pre- and post-tests would be devised and administered throughout the operation of the program. At the conclusion of the academic year, the results would be analyzed and recommendations made for revisions, refinements, and transprobability of the programs for the next year.

To insure complete understanding of the total career education concept, extensive inservice education was to be conducted in August, 1972 and continue throughout the 1972-73 academic year. This phase was to be conducted by the Division of Vocational-Industrial Education, Department of Teacher Education, and other participating departments. Planning for inservice was to begin in the early stages of the pilot program.

The Division of Occupational Research and Development, Texas Education Agency, was to monitor the project on a continuing basis. In addition, the Department of Research of the local school district was to conduct in-house evaluation during the 18-month period. A third party would evaluate the project to assess the effectiveness of each component, and the overall success and value of the total project.

Evaluation Component Research Design. The value and success of the total project were assessed on the basis of the research results, through observation of the components of the program, through comments and opinions of those involved in the program, through evidence of the comprehensiveness of the program (each subject area involved), and quantitative information regarding field trips and inservice meetings. In addition, special attention was focused on the continuity between program components.

CHAPTER III

METHODOLOGY

As in all sound evaluation, this evaluation effort had to be based upon the specific goals and purposes of the persons responsible for implementation. Evaluation can form the basis for reporting professionally and publicly upon the progress and success of a program. Evaluation results can also be used to secure additional financial or other forms of support when unmet demands are revealed. To be useful, evaluation should involve the cooperation of all who are participants in the vocational program--staff, students, parents, employers, labor officials, guidance personnel, and related public agencies. It should be comprehensive in its effort to measure the degree to which all of the program goals are being reached. Evaluation should deal with both long-term and short-term goals. Some aspects of a program can show improvement in a short period of time while others will require study over a period of years in order to judge effectiveness.

For evaluation purposes, it is not enough to set up vague, general goals. Standards of accomplishment need to be agreed upon in advance and stated with precision. If the evaluation process is built into the program at the beginning, evaluation is more easily accomplished, and produces more confident results when the time for it arrives.

All aspects of a program should be under constant review by a member of the project staff. There are some program changes which cannot be easily observed in a short period of time, and there is merit in providing for formal in-depth evaluation of a program at regular intervals. The practice of using qualified personnel from outside the staff and the community to participate in evaluation can bring a perspective that is often very valuable when coupled with the results of a self-evaluation.[1] It was with such specific comments in mind that the evaluation of these career education projects was undertaken.

Limitations

As was pointed out in Chapter II, the procedures for achieving the goals of career education of the three selected school districts were distinct; and thus, certain forms of analysis are difficult, if not illogical and inadvisable. The districts are not common, but parallel, analytical entities. This sets a marked limitation on procedures, for they should not, in general, be collapsed in such a way that they may be spoken of as a totality (i.e., "the districts" show thus-and-such of a collective pattern; or "the counselors," in general, exhibit the following attitudes), nor can easy comparison be made amongst them (i.e., "The K-12 plans for career education in Houston and Fort Worth exhibit striking differences..."--they would, of course, because they are organized and effectuated distinctly, and this fact is well known beforehand).

To cross-tabulate comparable variables by district is helpful and instructive to the researcher, but might lead to erroneous inferences on the part of the interested reader unless all or most such tabulations were accompanied by a great deal of narrative explanations and disclaimers. The difference in approach by each district was a major limitation placed upon this evaluation. A second major limitation placed upon evaluation was limited funds. Originally funds were not allocated for the development and administration of instruments or for data processing. When it became apparent that this would be a necessary component of the project, other funds had to be stretched to cover it. However, this forced an additional burden on the Project Director, and data processing had to be done by part-time help.

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[1] Organization and Operation of a Local Program of Vocational Education New York State University, Buffalo Western New York School Study Council. 1968.

A third limitation of importance in the total execution of the project was personnel. This is, of course, also related to funding: there was only enough money in the project budget for one person. Obviously, the responsibilities of this evaluative effort were greater than one person could reasonably handle. Therefore, the Director of the Center for Human Resources, at no cost to the project, spent time in overall planning and coordination and made several visits to the pilot school districts.

General Format for Analysis

To optimize the available data and work within the major limitations, the most effective method is to present the data district by district. At times, of course, summary comments encompassing all districts may be made, but these are not intended as overall conclusions or inferences to the whole; their intention is to indicate some insights which the data and objective observation have provided to the analytical process.

The Instruments: Development and Phasing

The initial activity on the project was a personal visit to the Fort Worth, San Antonio, and Houston project coordinators to determine the status of each of the projects in August, 1972. At this time, visits were made to each of the designated participating schools and meetings were held with principals, counselors, and teachers where implementation of programmatic activities either had occurred or would occur. A primary purpose of this initial visit was to examine the proposals with authorized individuals to establish an agreed basis for subsequent monitoring and/or evaluation of efforts. The net result of these visits was the realization by the evaluator that a more formal means of data collection would be required in order to cover all the schools and personnel involved. Therefore, work was begun immediately on development of appropriate questionnaires.

Two sets of questionnaires were developed for use with samples of three populations--administrators, counselors, and teachers. The same instruments were used with these samples in each district even though there were some differences in activities.

Information gathered through the initial interviews, as well as questions arising out of the interviews, provided the basis for the construction of the first set of questionnaires. Items were also generated from careful reading of the contracts between school districts and TEA. Where it could be determined _a priori_ that a limited number of independent alternatives to an item would best fit a response pattern, the item was made closed-ended. Where the range of possible alternative responses to an item was seen to be wide, the item was made open-ended (allowing for further condensation later on, if desired or indicated after inspection of the responses). This initial version of each questionnaire was administered in face-to-face interviews to samples of administrators, counselors, and teachers in the Fall semester of 1972-73 and the final instrument was ready for use in the pilot schools by late October, 1972.

Utilizing the results of an inspection of responses to the first set of questionnaires, a second version of each questionnaire was developed. These questionnaires were closed-ended, allowing for greater rapidity in filling them out and analyzing them. The second set, however, reflected the same general areas of interest and perspective covered in the initial questionnaires. These were given as self-administered instruments to basically the same samples of the same populations at the end of the Spring semester of 1972-73. It was hoped that by gathering parallel information at two points in time (averaging about five months between administration of the first and second questionnaires) changes in the career education programs could be determined.

Copies of the questionnaires, Phase I and II, for all samples appear in Appendix A.

The Samples

The limitation on this project for administration of instruments, mentioned above, precluded the interviewing of all persons encompassed in the target groups although, of course, this would have been a preferred alternative. It was thus necessary to sample from among the subject populations: first by school, second by individuals.

By predetermining the amount of time available to a single interviewer, as well as accounting for budgetary limitations, determination was made to interview personnel of the target groups in four elementary schools and two junior high schools in each of the three school districts (a total of six schools in each district, and an overall total of eighteen schools). Essentially, although these school districts served areas of different sized population and, hence, had different numbers of schools serving these populations, for comparative purposes equal-sized samples were desired for a more comprehensive evaluation. Stratification by level of school was an integral part of the sampling design. In each school district in which the desired number of schools was less than the total number in its category the desired sample was selected on a random basis (using a table of random numbers) so that every school in each category had an equal chance for selection.

Two exceptions to this method of sample selection were necessary. Because of the particular nature of the career education program in Fort Worth, two high schools were also selected for inclusion in the sample of schools in that district. The other exception was the inclusion of 11 junior high schools in the Houston Independent School District. Since only one or two teachers and one or two counselors were involved in each school, it was felt that all these persons needed to be interviewed to draw any conclusions concerning career education at this level in Houston. Thus, all 11 schools were included in the sample.

All teachers involved in career education in each school were placed on rosters (with the exception of the junior high schools in Houston, noted above). Fifteen teachers in each school were selected by random technique for inclusion in the sample.

Figure 1 indicates the actual total numbers in each district by level of school included in the teacher sample.

FIGURE 1

Level	Houston			San Antonio			Fort Worth		
		Total	Sample		Total	Sample		Total	Sample
Elementary	Schools	36	4	Schools	18	4	Schools	4	4
	Teachers	966	60	Teachers	225	60	Teachers	60	60
Junior High	*Schools	11	11	Schools	4	2	Schools	2	2
	Teachers	13	13	Teachers	60	30	Teachers	91	30
High School							Schools	2	2
							Teachers	202	30
Total in sample:			73			90			120

*Sample of schools not drawn to insure adequate teacher response, as described in text.

The samples of counselors and administrators were inclusive of all available persons in each school holding such positions. Included also in these samples were other upper level personnel in each school district who were directly concerned with the management of career education programs. The total numbers in these samples were: counselors, 47; administrators, 33.

Sample respondents who participated in the first round of interviews in the Fall were also requested to participate in the second round interviews in the Spring. Small changes in numbers in the first and second round samples are mainly due to modifications and alterations of personnel in the school districts in the intervening period. The actual number of questionnaires selected for analysis in the three major groups is given in an introductory statement preceding each section in Chapter IV.

Analytical Procedures

Information gathered through the use of the instruments was edited and coded for computer processing. Each variable was then programmed for individual distribution for each district (univariate distributions). Where appropriate, tests of statistical significance were built into the programming. These significance tests were useful to the analyst as indicators of trends but not as truly usable bases for inference. The distinct natures of the three programs would make most such inferences specious and untenable.

Presentation of Results

As previously mentioned, data collected in the interviews are presented district by district. Within each district, teachers, counselors, and administrators were interviewed. The results of these interviews are presented for each group individually within each district. These data are also grouped in special categories which best illustrate the attitudes and opinions of the respondents toward implementation procedures; i.e., curriculum materials, objectives, inservice training, techniques and procedures, anticipated student outcomes, and the methods used to measure the progress of these components. The categories for data grouping were chosen to provide a convenient and comprehensive picture of the implementation activities undertaken in each school district according to the stated objectives outlined in each proposal.

The tables in Appendix B clearly list the questions, possible replies, and actual replies in each district for each of the categories. This statistical appendix will be referred to in the narrative portion of this report where necessary. An attempt has been made to integrate meaningful data into the narrative itself.

In Appendix B the category "NR/NA" appears as an alternative response for most items. This is interpreted as "No Response/Not Applicable."

As stated earlier, Appendix A includes each of the six instruments used in this study.

CHAPTER IV

ANALYSIS AND PRESENTATION OF INTERVIEW DATA

HOUSTON INDEPENDENT SCHOOL DISTRICT

HISD was actually in its third year of programmatic activity at the awareness (K-6) level. The principal objectives delineated for achievement during the period of the funded proposal were an extension of procedures and processes begun in 1970-71. A staff of consultants under the direction of the Occupational Awareness (OA) Coordinator was engaged in curriculum revision efforts primarily centering around infusion of carefully selected career education content material into the approved social studies curriculum guides. The prepared material was to be inserted in the teachers' guides and delivered to the 36 schools selected as project sites.

Inservice sessions explaining and illustrating the use of the produced materials were to be conducted by the OA staff. The consultant staff also would serve as liaison between the Coordinator and the teachers, supervise the use of audio-visual materials and equipment, and equip and maintain mini-career centers, one of which was to be established in each of the areas comprising the Houston Independent School District.

The persistent goal of the OA Coordiantor and staff was to inculcate in teachers, counselors, principals, and students the concepts of career education which had been given top priority by TEA. As outlined by TEA, career education was not to be a program or a presentation to selected groups, but rather an ideal guideline upon which all educational endeavor could be structured and refined to bring relevant educational experiences to everyone.

The research and development effort of the elementary component in HISD would focus on two phases of the ongoing Career Development Program: development of criterion performance tests on teaching materials and affective changes in children in the program. All materials currently used in teaching career awareness would be systematically sequenced for class presentation. Performance tests would be developed for each instructional unit.

The research hypothesis was that experimental schools in which the Occupational Awareness Program was implemented would have a significant difference between pre-testing and post-testing as measured by the Houston Occupational Awareness Inventory (HOAI). The experimental design used was a pre- and post-test experimental group-control group design. The experimental subjects were drawn from five of the highest ranking elementary schools in terms of level of program implementation. All subjects were given the pre-test (HOAI) during September, 1972, and the post-test (HOAI) during May, 1973. A monitoring procedure was established for periodic observation of classroom activities which would provide a continuous in-house evaluation by the administrators of the HISD project.

Two monitors visited classrooms in each of the 36 elementary schools cooperating in the project. These visits were continuous and consisted of observing teacher activities and interviewing teachers, principals, librarians and media specialists, and special education teachers. A monthly report of these observations was sent to the project directors by the consultant for the Research Services Department.

The Houston Independent School District was also involved in a search and analysis of available literature adaptable to the needs of middle school students. The primary emphasis was to be a selection and collection of such material which would be printed and distributed to teachers of occupational orientation classes in 11 middle schools.

In each participating middle school, an occupational orientation teacher was assigned a limited enrollment of seventh and/or eighth grade students for a one-semester course. Class size was limited to 25 students, four periods a day. Occupational information--both purchased and developed--was disseminated to these classes. Constant revisions were being made in selections of multi-media material as well as other printed matter available for students at this level.

The University of Houston evaluation procedures would include a minimum of two on-site interviews with teachers, counselors, and administrators in the selected schools, observation of consultant and monitor activities, and discussions with the Research Services Department staff on testing techniques and results.

TEACHERS

Phase I interviews were conducted with 73 teachers in four elementary schools and 11 middle schools in the Houston Independent School District. Incorrect marking and failure to make any response to all of the questions resulted in 60 questionnaires actually being selected for purposes of data analysis. The same teachers were contacted for Phase II interviews. Absences, retirements, and requests that they not be interviewed again reduced the number of teacher interview forms available for data analysis to 56. Detailed answers to all questions discussed in each category in this section appear in Tables 1 and 2 of Appendix B.

Objectives

In Phase I interviews, teachers were asked to list the objectives of career education in their schools. Those cited were:

1. To help students develop a clearer perception of themselves as they work toward full career potentials.
2. To increase interest and develop a greater understanding and appreciation of the place of work in a person's life in our society.
3. To introduce information about clusters of occupations and to relate these to educational preparation.

The Phase II questionnaire presented a checklist of objectives from the scope and sequence used by HISD. Ninety percent of the teachers selected positive attitudes about work, school, and society, and over 70 percent marked a realistic understanding of the relationship between the world of work and education.

Teachers were in strong agreement in both interviews that career education concepts helped young people understand themselves and offered every individual a better chance to achieve job satisfaction. More than 85 percent of those responding to both interviews indicated agreement that many high-salaried jobs do not necessarily require a college degree. They also agreed that career education could help reduce the number of dropouts. Although 11.7 percent in Phase I and 7.2 percent in Phase II did not answer, between 85 and 90 percent of those interviewed thought the objectives of career education in their schools were realistic and could be achieved.

Overall, Houston teachers consistently identified objectives they considered relevant to the career education activities in their schools. They felt the information concerning the wide variety of occupations available would offer more students an opportunity to make realistic career choices. In turn, students would be motivated to continue their education if they understood the world of work and how they could satisfactorily fit into it. Teachers also agreed that it was not always necessary to have college degrees to obtain high-salaried jobs.

Although the emphasis toward inclusion of career information had been primarily directed toward the social studies curriculum, the increased percentage of positive responses by all teachers indicates the almost total awareness of HISD teachers toward career education implementation activities.

Inservice

Inservice sessions for career education, to be conducted by the Occupational Awareness Coordinator and consultant staff, were the principal vehicle selected to train teachers in the following areas:

1. To recognize and utilize career education concepts.
2. To become familiar with prepared curriculum material.
3. To learn the disposition and proper use of audio-visual materials.
4. To develop an awareness of the role and function of the OA staff in implementation.

In both Phase I and Phase II interviews, only 50 percent of the teachers reported that they had attended inservice sessions for career education. They were asked how many days were spent in these meetings: 51 percent in Phase I did not reply, 23 percent attended one session, and 11.7 percent attended more than nine. This last figure mainly represents middle school teachers who met with the Director and the Occupational Orientation Consultant periodically. Phase II responses show 9.8 percent not replying, 51 percent attending no sessions, 27.5 percent attending one day of inservice, and 9.8 percent attending eight or more sessions.

When Phase I teachers were asked who conducted the inservice sessions for career education, 21.7 percent stated the coordinator conducted the sessions; 35 percent indicated the consultant was conducting them; 10 percent said other teachers were in charge of inservice meetings in their schools; 1.7 percent listed the principal; and 6.7 percent indicated the the counselor conducted the meetings. Phase II respondents answered the same question as follows: 21.8 percent, the coordinator; 7.3 percent, the principal; 36.4 percent, the consultant; and 3.6 percent, a counselor.

About 65 percent of the teachers in both interviews agreed that inservice sessions are necessary in order to understand the concepts of career education, but 11.7 percent in Phase I and 5.4 percent in Phase II did not respond to this question.

The December report from the Research Services Department to the Superintendent of Occupational and Continuing Education contained the following statement in a section entitled, Specific Program Modification Suggestions: "4. Many teachers expressed the need for additional inservice. Some have had none and would welcome the help." The March report indicated that teachers were receiving assistance from consultants who were explaining occupational awareness concepts and activities to them.

In summary, almost 50 percent of the HISD teachers interviewed had not attended inservice sessions for career education during the 1972-73 school year, although about 65 percent stated such sessions were necessary to understand the concepts. In both interviews, more than a third of the teachers had attended inservice sessions conducted by OA consultants. Some teachers said they had discussions in faculty meetings about career education and OA consultants were often present to introduce new materials and to talk to individual teachers requesting assistance.

When teachers were asked why they had not attended scheduled inservice meetings, they often replied that these sessions were for the social studies teachers who were receiving curriculum inserts for the social studies teachers' guides. Others said they were visited regularly in their classrooms by the OA consultant and were kept aware of new materials and equipment in this way.

Teachers in HISD apparently attended career education inservice meetings on a voluntary basis and otherwise depended upon the services of the assigned OA consultants to provide any needed assistance.

Curriculum Material

The major responsibility for collection, analysis, selection, and preparation of carreer-oriented curriculum materials was assigned to an occupational orientation consultant for the middle school component and the occupational awareness coordinator and consultants at the elementary level.

About 35 percent of the Phase I responses indicated that teachers had been involved in the preparation of curriculum materials to some extent, with an average of two days released time having been provided them by their administrator for this activity. Only 20 percent of the teachers in Phase II had prepared curriculum materials for distribution to others. In both interviews, about 60 percent of the teachers agreed that it takes more time to prepare lessons with occupational content than those for the regular curriculum.

Ninety percent of the teachers interviewed in Phase I stated that they had received assistance in collecting and analyzing career-oriented curriculum materials from the OA coordinator and consultants and from the Occupational Orientation Consultant. Teachers in Phase I were then asked the following question: Do you feel the curriculum materials you have received on career opportunities have helped you? If yes, how? Ten percent did not respond, 78.3 percent said yes, and 11.7 percent said no. The responses listed below indicate the ways in which the material helped:

1. Gives direction and structure.
2. Increased personal knowledge of career opportunities.
3. Gives nucleus around which to build lesson plans.

4. Source of activity ideas.

5. Students enjoy variety of materials to work from.

A question included in the Phase II interview form was formulated to give more precise information concerning teacher reaction to the curriculum material received from consultants. Detailed response data are presented in Table 2, Appendix B, but those most frequently checked in the list of items provided were:

1. Provided variety in making information more effective and realistic for students, 60.7 percent.
2. Assisted me in planning activities and selecting appropriate audio-visual materials, 57.1 percent.
3. Helped me understand how to teach and relate my subject to career education, 55.4 percent.
4. Offered abundance of new ideas and materials, 41.1 percent.

Although monitors reported about 50 percent of the teachers were not using the curriculum material they were provided the first semester, this figure changed to a positive 75 percent participation in all activities and use of material by the end of the 1972-73 school year.

When asked to recommend procedures for selecting materials, teachers most often mentioned that material should be relevant, easily understood by the student, pertinent to the particular classroom situation, and timely. Phase II responses indicate substantial agreement.

In summary, 35 percent of the HISD teachers interviewed in Phase I had been involved to some extent in the preparation of curriculum material with occupational content, and this number had decreased to 20 percent at the time of the second interview. Most of these teachers had worked in teacher committees reviewing and revising curriculum guides currently being used in the district. They were generally in agreement that it takes more time to prepare lessons containing occupational information.

Teachers reported receiving continuous assistance from the consultants and coordinators, and their responses to the ways in which the material had helped them indicate they were aware of the content and suggested activities. The presence of the consultants in the schools undoubtedly contributed to the increased use of the curriculum material as reported by the monitors; i.e., from 50 percent to 75 percent by the end of the school year. The criteria suggested by teachers for selection of material were basically those which would be used for selection of materials for any subject matter discipline.

Evaluation

The Phase I interview form asked teachers if they knew whether career education in their school was being evaluated by an in-house organization--33 percent did not reply, 30 percent answered yes, and 36.7 percent said no. About 10 percent thought the Research Services Department or the area superintendents would be responsible for this activity. The majority of the teachers said they did not understand what the question meant; therefore, the question was rephrased for the Phase II interviews: What means should be used for evaluating career education in your school? Check any statements which are applicable. Almost 59 percent thought student attitudes toward the world of work should be measured; 55 percent indicated there should be a way to compare the interest of students who had been involved in career education with those who had not; another 44 percent said teachers, students, and parents should be provided an opportunity to express their views about career education.

The Houston Occupational Awareness Inventory was developed by the Research Services Department of the Houston Independent School District as a means of evaluating the level of awareness of career education-based concepts in elementary school children. The HOAI purports to measure cognitive and affective changes brought about as a result of implementation of an occupational awareness curriculum. The pre- and post-tests were administered in September, 1972, and May, 1973. The teachers interviewed by the University of Houston evaluator did not mention the pre- and post-tests being administered by the HISD Research Services Department as a part of the evaluation activities in their schools. However, informal interviews were held with teachers while these tests were being given and the reaction of the majority was that the content was too advanced for the students, and the format was confusing to students from kindergarten to the fourth grades.

The responses given to the evaluation statements in both interviews indicate uncertainty as to the types of evaluation methods and procedures being utilized in HISD. The monitors' reports to the Research Services Department substantiate the data here reported. Administrative reaction to these reports resulted in the development and use of a monthly report from principals concerning the degree and types of implementation activities being undertaken in their schools.

The procedures established for monitoring career education activities in the elementary schools provided the project directors a detailed picture of the attitudes of teachers and administrators and the manner in which the provided curriculum material was being used. These timely and accurate reports, plus the data from the tests administered to students were the primary source of evaluation which HISD utilized to reach its stated objectives for this component.

The proposed visits of the monitors, testing personnel, and evaluator to the classrooms at different times was information not always given to the teachers. Although teachers thought means of evaluation should include instruments to measure student attitudes toward, and interest in, career opportunity information, they apparently were not relating the HOAI pre- and post-tests to this component.

According to the RSD final report, conclusions based upon the experimental results are that the implementation of the Occupational Awareness Program did not effect changes in the affective and cognitive domains of occupational awareness in terms of the subjects' performance on the HOAI.

Student Awareness

Teachers responding to Phase I questions about anticipated student outcomes and increased awareness as a result of their career education experience listed the following items as evidence of student interest:

1. Knowledge of a wide variety of jobs.
2. Better choice of career.
3. Students understand relationship of academic subjects to desired occupation.
4. Development of a positive attitude toward work.

These and other items were included in a checklist for the second interview. The items most frequently selected by Phase II respondents were:

1. Students will be familiar with a wide variety of job opportunities, 71.4 percent.
2. Students will understand the importance of getting along with other people, 69.6 percent.
3. Students will have a greater awareness of themselves and their role in society, 57.1 percent.

When teachers were asked if they thought students involved in career education activities were making wiser career choices than those not involved, 33 percent did not reply, 36 percent thought they were, and 20 percent said they were not. Elementary teachers generally thought this question was not applicable because their students were so young. The content of this question was included with other checklist statements in the Phase II interview form.

In both interviews, teachers were asked if their students had observed career education in other schools. Phase I responses: No reply, 6.7 percent; yes, 10 percent; no, 83.3 percent. Phase II responses: No reply, 12.1 percent; yes, 13.5 percent; no, 86.5 percent.

In summary, the respondents in both interviews considered the development of proper attitudes as important as the knowledge of the variety of occupations available. The interviewed teachers were basing their answers to questions on increased awareness and anticipated outcomes on observation of student reaction to material, kinds of books selected for free reading, role playing, and questions directed toward community speakers and visitors.

Although elementary teachers generally were not so aware of whether students were making more realistic career choices, they mentioned the fact that fourth and fifth grade students were displaying more interest in careers other than those of doctor, nurse, policeman and fireman.

The number of teachers who had not received the career oriented curriculum materials or who were not using them probably accounts for the large percentage of "no reply" or "disagree" responses to the career choice statements.

Techniques and Procedures

The Phase I interview form asked teachers if they were using any techniques or procedures in teaching career education concepts which were different from those formerly used; 23.3 percent did not reply, 41.7 percent stated they were, and 35 percent said they were not. Those replying in the affirmative listed the following items:

1. More aware of coordinating career education with other subjects.
2. Using more guest speakers from the business community.
3. Students writing and presenting TV commercials in class presentation.

4. Using more career related audio-visual materials.
5. Students doing more individualized study.

Phase II respondents most frequently selected the items listed below from a checklist of applicable techniques or procedures used only in teaching career education concepts:

1. Using activities listed in the curriculum guides, 69.6 percent.
2. Using parents as role models, 41.1 percent.
3. Making career information part of every subject taught, 37.5 percent.
4. Using community resource people as speakers in all grade levels, 35.7 percent.

In Phase I an even percentage of affirmative (41.7) and negative (41.7) responses were received concerning infusion of concepts in daily presentations, but 16.7 percent did not reply or felt the question was not applicable. Phase II responses show about two-thirds of the teachers were including occupational information in daily presentations but 23.2 percent still did not reply to this question.

Overall, the same teaching techniques and procedures are utilized for presentation of career information as are used in any other subject matter presentation. The demands for consultant time in advising teachers about other materials and community resource people increased substantially during the school year. The career centers became a major source for collection and distribution to teachers of relevant and timely information, material, and equipment.

The teachers replying to the question of career education concepts being included in daily presentation stated they did include this information when they felt it was applicable, but could not honestly say this was a daily occurrence. If the statement had not been so limiting, the affirmative responses probably would have been noticeably greater in number.

Single Change

Each set of interview forms for every group contained the following question, "What single change would you make in career education in your school?" The responses in Phase I were post-coded and the same order was maintained for the identical question in Phase II interview forms. The percentage of teachers replying to each of the suggested changes for both interviews was as follows:

		Phase I	Phase II
1.	No reply	23.3 %	0
2.	No change needed	28.3 %	12.5 %
3.	Expand services to students	11.7 %	17.9 %
4.	Involve more teachers	0	19.6 %
5.	Offer more guidance and counseling service	0	21.4 %
6.	Better teacher preparation	5.0 %	17.9 %
7.	Better student selection	6.7 %	8.9 %
8.	More material and resource centers	13.3 %	23.2 %
9.	Drop the program	8.3 %	25 %
10.	Other	3.3 %	12.5 %

Only two categories in Phase II show a decrease in the percentage of responses from those listed in Phase I--those not replying dropped from 23.2 percent to 0; and no change needed, from 28.3 percent to 12.5 percent. Each of the remaining items received a significant increase in percentage of responses. These increases are due, in part, to the fact that more teachers did reply to this question in Phase II. Also, teachers had been involved in career education activities for almost eight months at the time of the last interview and were more aware of the needs of their students and the areas requiring more effort and emphasis. The 10 percent increase in the need for more materials and resource centers could indicate that teachers were using the materials provided and recognized and appreciated their importance and availability.

The relatively high percentage stating the program should be dropped was concentrated in one elementary school. There was no observed cause for this reaction. The teachers marking the category "Other" were referring to a desired revision in the scheduling of the occupational orientation classes in the middle schools.

Another question which indicated a change teachers might like to see was whether or not teachers should be allowed to participate in career education on a voluntary basis only. Forty percent of the Phase I interviewees and 70 percent of Phase II teachers felt that career education activities should be voluntary.

Summary

During the first interview round, many elementary teachers said they thought career education was to be presented by social studies teachers only and did not feel competent to respond accurately to the questions asked. Their awareness and knowledge of career education activities increased noticeably during the year and Phase II data reflect this change.

The work of the consultants in their assigned schools was unquestionably the single most influential factor in promoting dissemination of knowledge, information, material, and audio-visual equipment to all students and teachers in the selected elementary project sites.

The reported attendance at inservice sessions shows no significant increase from one interview to the other. However, teachers themselves were requesting more assistance from the consultants at the end of the school year. The comment was frequently made by teachers and administrators that it would be desirable to have the consultants scheduled for daily visits to the participating schools.

Delays in editing, printing, and disseminating curriculum guides and inserts forced a revision of the timetable for actual classroom participation in some instances. These problems were resolved by the time of the second interview, and the curriculum materials were considered most helpful in presenting occupational information at all levels.

The establishment of mini-career centers in each of the allocated HISD areas was successfully accomplished. Multimedia, software and hardware were produced and/or purchased by the Occupational Awareness staff for assignment to the various centers. Students and faculty were instructed in the content, use and distribution of the material in the centers, which were maintained and operated by designated consultants from the OA staff.

The Houston Occupational Awareness Inventory (HOAI) was developed by the Houston Independent School District Research Services Department as a means of evaluating the level of awareness of career education-based concepts in elementary school children. These tests were administered on a pre- and post-test basis to selected elementary students in September, 1972 and May, 1973. The conclusions reached by the RSD are that the implementation of the OA program did not effect changes in the affective and cognitive domains of occupational awareness in terms of the students' performance on the HOAI.

The tests developed for the middle schools were distributed after the second semester began, and the results were not available at the time the project ended. The analysis and collection of occupational information and multimedia was completed, and the resulting Occupational Orientation book was distributed to middle school teachers for use in 1973-74.

Responses to the single change statement indicate teachers believe more material and resource centers are needed, and more guidance and counseling services should be available to students.

Houston teachers are knowledgeable about career education concepts and objectives. They are inventive and interested in presenting information to their students which will better prepare them for active, satisfying experiences in the world of work. An emerging awareness of the priority assigned to this educational endeavor is apparent and teachers in every subject were contributing ideas and time to implementation activities.

Teachers were reporting increased awareness of the value of planned evaluation techniques. The data indicated student attitude changes should be measured and compared with those not involved in the program. However, the teachers were not equating all of the HISD evaluation efforts with an established in-house evaluation system.

COUNSELORS

In the four selected elementary project sites, an attempt was made to interview educational counselors assigned on a rotating basis to these schools. Of the 11 middle schools participating, each had at least two counselors who were interviewed. There were 28 Phase I and 29 Phase II interviews, all of which were used in the analysis. Detailed answers to the questions asked of counselors appear in Tables 3 and 4, Appendix B.

Inservice

Only 25 percent (7 of 28) of the HISD counselors interviewed had attended career education inservice sessions according to Phase I data. Of that group, 10.7 percent said they had attended two days, and one (3.6 percent) said he had attended more than eight sessions. Phase II interviews revealed similar data: 82.8 percent had attended no inservice for career education, and 10.3 percent had attended two sessions.

In summary, these data appear to indicate that the majority of the counselors did not consider these inservice sessions for career education necessary to carry out these assigned duties and responsibilities.

Student Services

The majority of the counselors maintain current files on educational opportunities and occupational information of a general nature. However, only 50 percent in Phase I and 55 percent in Phase II maintained a file of local or community employment opportunities. Some means for helping students, 14 years of age and under, find part-time employment was suggested as one possible solution to the problem of early dropouts. About 75 percent of the interviewees in Phase I and 62.5 percent in Phase II stated that no service existed, although many felt it was needed. The middle school occupational orientation classes were mentioned as the primary source for student information about jobs for this age group.

Over 75 percent of the counselors in each interview reported they conducted an individual interview with all of their assigned students annually. In addition, they met with students assembled by grade level and in subject matter groupings.

Generally, although counselors received information of educational opportunities and were advising students of curriculum possibilities for continuing programs at the high school level, there was no organized procedure established by counselors for collecting data on occupational opportunities. The materials and information collected at the mini-career centers in six selected elementary schools were available to all school personnel involved in career education implementation activities. The occupational orientation teachers at the middle school level maintained up-to-date files of occupational opportunities, and the counselors would advise students seeking such information to contact these teachers. Counselors generally considered these sources adequate for the age of the students served.

Few of the HISD counselors reported they had experience in occupational counseling. The statement was often made that this service was performed by senior high school counselors and the placement office personnel. A very common complaint of counselors at every level concerned the abundance of paper work necessary in computerized scheduling, leaving little available time for more personal counseling and guidance with students.

Testing

Counselors were asked, what type of sequential program of guidance testing is being used by the counselors? About 54 percent of the Phase I respondents said the program had been discontinued, 18 percent said there was none at the present time and an equal percentage reported standardized tests were being used, and 11 percent of the counselors did not reply to this question.

Eight (28.5 percent) of the Phase I middle school counselors stated ninth grade students who were not considering college could take the General Aptitude Test Battery on an individual request basis. College bound ninth graders in the top 20 percent of their class were tested with NEDT when requested. Other tests administered on a request basis were Kuder Interest Inventory, Diagnostic Reading, and Differential APT. One (3.6 percent) elementary counselor listed OTIS, Iowa Basic Achievement, and SRA Achievement tests which were used for elementary students.

Of the counselors in the Phase II interviews, 82.8 percent stated the testing program was still discontinued; 10.3 percent said standardized tests were being used (same as listed above); and 3.4 percent reported the program had never been established.

The majority of the counselors thought the testing program had been discontinued because of a lack of funds, although there was no official reason offered for the discontinuance of the testing program. The elementary counselors expressed concern that the Remedial Reading program had also been discontinued. Although many of the standardized tests had been administered on a request basis only, the absence of any formalized testing procedure was considered by the counselors interviewed to be a handicap when they were advising students.

At the time of the last interview, counselors had received no official notification as to the status of the testing program for the 1973-74 school year.

Evaluation

Phase I interviewees were asked to enumerate criteria they considered relevant to evaluation, and these answers provided the variables used for alternative selection in the Phase II interviews. Criteria suggested by Phase I responses were grouped as: no response or considered not applicable, 17.9 percent; greater opportunity for all students to participate in the program, 25 percent; interest expressed by students, 29 percent; establish a follow-up program, 25 percent; parental involvement, 10.7 percent; and, in addition to those who did not respond, 10.7 percent said the program was too new to evaluate.

The evaluative means checked most often by counselors on the Phase II questionnaire were: instruments which would measure student attitude toward the world of work, 58.6 percent; compare student interest with those not involved in career education, 55.2 percent; and students, parents, teachers given opportunity to express their views of career education, 41.4 percent. Only three (10.3 percent) counselors thought evaluation should be based on career education objectives.

In Phase I, almost 40 percent of the counselors stated students were making more realistic career choices and over 50 percent thought potential dropouts were experiencing success in career education. The percentages (53.6 and 42.9) of those working no response or not applicable were so high that these questions were not included in the Phase II interview forms.

Counselors were asked if advisory committees were working with them and 20 percent replied yes in Phase I, and 10 percent said yes in Phase II. However, of those who responded, several said they thought the advisory committee was made up of teachers and the coordinators of the elementary and middle school components.

The Phase II interview form for counselors contained the following question: To your knowledge, is there a well defined plan in your district for coordinating career education from elementary to middle to high school levels? 51.9 percent answered yes, and 48.1 percent answered no.

In summary, although about 25 percent of the counselors interviewed in Phase I did not reply or thought the program was too new to evaluate, more than 50 percent stated instruments to measure student progress were the means they would select for evaluation of the progress of career education. The percentages recorded for responses in Phase II significantly support this contention. Interestingly enough, there was no indication, in any interview, that the counselors considered the HOAI to be a representative instrument; in fact, the presence of the testing teams and monitors in the elementary schools was not mentioned as an evaluation activity. The middle school counselors said they were not aware of any specific testing program for their students.

The lack of awareness of advisory committees cooperating in planning activities was explained by a project director to be in the planning phase, and counselors naturally were not yet involved with them.

A primary objective for the implementation of career education in any school system was to be the degree of articulation established between all components. Therefore, school personnel who are advising and counseling students on continued educational endeavors, would be acquainted with any structure which has been developed for a smooth coordination of effort from grades K-12. Yet, almost 50 percent of the HISD counselors stated they were not aware that such a plan was in existence nine months after implementation began.

Occupational Information

Counselors in both interviews were asked if students were requesting more information about occupations and, as a consequence, if counselors were doing more occupational counseling since career education was implemented in their schools. Of the 89 percent replying in Phase I, 39.3 percent answered yes and 50 percent said no. In the second interview, 34.5 percent said they were doing more counseling, but 65.5 percent were not.

The number of subject matter teachers including occupational information in their presentations was thought to be noticeably increasing according to about 55 percent of the counselors responding in each interview.

Counselors were asked, How do you project future occupational requirements for your area? Although almost 33 percent did not reply, some of the Phase I responses are listed below:

1. Compare local trends with national trends as shown in the Occupational Handbook, 21.4 percent.
2. Increase in technical-vocational jobs, 32.7 percent.
3. Increase in desire for career education, 35.7 percent.
4. Recommendations of superintendents and/or guidance director, 17.9 percent.
5. Not much changing in this old, established area, 7.1 percent.

Because the intent of the question was not apparent, a list of possible sources for this type of information replaced that question in the Phase II interview form. The most frequently checked alternatives:

1. Employment Commission, 41.4 percent.
2. Community business leaders, 48.3 percent.
3. U. S. Department of Labor, 62.1 percent.

Table 4, Appendix B, gives a detailed picture of the responses.

In general, counselors reported no observable increase in the amount of occupational counseling since the implementation of career education. In fact, the data show a decrease of 15 percent in the amount of occupational counseling they were doing from the first interview to the last, however, this percentage differential may be the result of the 11 percent recorded as not replying to this question in the first round of interviews.

More than half of the counselors thought there was an observable increase in the number of subject matter teachers including occupational information in their presentations. These responses were stated as a matter of opinion only, based on informal discussions with teachers.

The large percentage (33 percent) of Phase I counselors not replying to the question concerning the methods used to project future occupational requirements may be due to the fact that the intent of the question was not clear. Of the 62 percent selecting the Department of Labor as a source for future job trend information, the majority were unable to list a specific publication of that department. Many of the counselors stated such projections were not a part of their assigned duties.

Single Change

Responses to whether counselors maintain communication with teachers involved in career education were 89.3 percent yes in Phase I and 96.4 percent yes in Phase II.

When asked what single change in career education would you make in your school? Phase I replies were: 35.7 percent thought student services should be expanded; 32.1 percent listed the need for more material and resource centers; 10.7 percent did not reply; 10.7 percent said no change was needed; and 10.7 percent wanted more teachers involved. More than half of the Phase II respondents stated student services should be expanded; 13.6 percent thought more material and resource centers were needed; 13.6 percent said more teachers should be involved; and 27.2 percent did not reply. Many counselors noted that the need for expansion of student services and for more material referred to a desire for more vocational course offerings in the early middle school years.

In general, the responses concerning a change which they would make in career education in their schools did not change to any appreciable extent from one interview to another. When some of the counselors were asked why they did not wish to make a response, they said they could not think of one at the time, or stated they were not well enough acquainted with the progress of the program. HISD counselors did report frequent informal discussions were held with teachers about the activities of career education.

Summary

The HISD counselors were primarily concerned with advising students about current curriculum offerings and plans for continued educational pursuits. They maintained files of current educational opportunities for the local areas. However, the youth of their counselees precluded the need for extensive files of post graduate educational offerings or information relating to job opportunities beyond high school. Occupational information of an investigative nature was furnished by teachers in the middle school occupational orientation classes and by the OA consultants at the elementary level.

The student requests for part-time employment were handled by the counselors on an informal basis. The majority of the counselors had individual counseling sessions with students assigned to them at least once a year. In addition, they frequently met with student groups in academic classes, as well as grade level groupings.

The HISD Testing Service had discontinued the practice of administering standardized tests, but the majority of the counselors were hopeful of its reinstatement in the 1973-74 school year.

The recorded data show about half of the counselors thought evaluation should measure student progress in understanding and relating career education concepts, although the testing procedure conducted by the Research Services Department was not mentioned as an evaluation activity.

Appointments of interested community business and industrial leaders and school representatives were being made in early 1973 to the Advisory Committees, which would assist in planning career education activities in the future months.

A structure for coordinating all components, K-12, of the implementation of career education had been formulated by the school district administrators and the project directors. In April, 1973, almost 50 percent of the counselors were not aware of such a plan according to the data received in the final interview.

Sources most often mentioned by counselors for predicting future occupational requirements for their area were the U. S. Department of Labor and community business leaders.

In both interviews, counselors responding to the question of what single change they would make in career education in their schools, stated student services should be expanded.

ADMINISTRATORS

The number of Houston administrators interviewed was the same for both interviews, 13. The Phase I interview contained a large number of open-ended questions whose answers comprise the checklists included in the Phase II interview form. Phase I questions 17-24 offer an opportunity for an expression of opinion on diverse topics concerned with the implementation of career education. These attitude questions are included in close-ended statements in the second (Phase II) form. Answers to all the questions grouped in categories appear in Tables 5 and 6, Appendix B.

Objectives

The career education objectives most often listed by Phase I administrator respondents were to help the students to:

1. Become aware of the world of work.
2. Develop a positive self-image.
3. Become informed about a wide variety of career opportunities.
4. Understand that there is dignity in all work.

Of the administrators interviewed, 85 percent felt the objectives of career education were in accord with those of the total school program and could be schieved because they were realistic.

The items listed which describe the objectives in Phase II were:

1. A realistic understanding of the relationship between the world of work and education, 93 percent.
2. Positive attitudes about work, school, and society, 93 percent.
3. Personal characteristics of self-respect, self-reliance, perseverance, initiative and resourcefulness, 84.6 percent.

The complete range of responses is shown in Table 6, Appendix B.

The following responses were in answer to the question concerning what direction administrators thought career education should follow in the future:

1. Programs should be mandatory, 23.1 percent.
2. Programs should involve all students, 30.8 percent.
3. All subject matter presentations should include occupational information, 46.2 percent.
4. There should be more community involvement, 23.1 percent.

The Phase I listings, together with responses from administrators in the Harlandale and Fort Worth school districts, formed the checklist for the same question in the Phase II interview form. HISD administrators most frequently checked the following items:

1. Programs should involve all students, 46.2 percent.
2. There should be more inservice for all school personnel, 46.2 percent.
3. Career information should be correlated with all subject matter, 61.5 percent.
4. Greater involvement of business and industrial community, 30.8 percent.

Overall, the HISD administrators were well informed and articulate about the career education objectives for their schools. The primary focus of implementation was directed toward improvement and development of student attitudes toward themselves and the world of work.

The respondents believed all students should be participating in the activities, and expressed a desire for more involvement by the business community. To present the concepts of career education most effectively, the administrators considered it necessary for all school personnel to attend inservice sessions which would assist teachers in infusing the career information into all subject matter presentations.

Evaluation

HISD administrators (Phase I) were asked what type of in-house evaluation was being conducted for career education: 30.8 percent stated the Research Services Department (RSD) was testing elementary children and sponsoring monitors for classroom observation; 38.5 percent mentioned principal evaluation (classroom observation, faculty meetings, teacher group discussions); and 30.8 percent indicated no evaluation was being done in Phase I.

In Phase II the question was reworded and the principals were asked if the local school system was evaluating career education in their school, 67 percent replied in the affirmative, 50 percent thought RSD was involved, while others thought OA consultants and building principals were responsible.

Suggestions for criteria to be used in evaluation recorded from Phase I forms included program effectiveness, student enrollment, student interest and attitude, and degree of interest and involvement of teachers. The Phase II checklist data are in Table 6, Appendix B. The alternatives receiving the largest percentage of responses were:

1. Students, parents, teachers given opportunity to express their views of career education, 84.6 percent.
2. Instruments which would measure student attitudes toward world of work, 61.5 percent.
3. Establish follow-up program, 53.8 percent.

The strengths and weaknesses of career education as perceived by Phase I principals are recorded below.

Strengths--builds pride and self-respect, 38.5 percent; increases student awareness of world of work, 46.2 percent; students better able to set and achieve goals, 30.8 percent; supports student-centered approach, 30.8 percent; lends excitement and meaning to instruction, 23.1 percent.

Weaknesses--more funds needed, 23.1 percent; lack of organized planning, 23.1 percent; need more relevant material, 15.4 percent; not enough students involved, 30.8 percent.

The strengths and weaknesses as perceived by Phase II respondents were:

Strengths--increased student awareness to world of work, 100 percent; relevant curriculum materials, 53.8 percent; consultant services, 53.8 percent; resource personnel involvement, 61.5 percent; students developing positive self-image, 92.3 percent.

Weaknesses--inadequate communications, 15.4 percent; confusion about objectives, 30.8 percent; lack of curriculum materials, 46.2 percent; lack of time to train teachers, 46.2 percent; all students need information, 61.5 percent; availability of trained personnel, 23.1 percent; more funds, 46.2 percent.

In summary, the majority of HISD administrators became more aware of evaluation activities as the school year progressed. However, of those interviewed, one third still stated no evaluation was being conducted at the time of the last interview. The testing and monitor programs conducted by the RSD were most often cited by elementary principals, but middle school principals did not mention any specific evaluation activity.

In response to questions requesting criteria for evaluation, the administrators generally agreed that measurement of student progress in various forms would be most effective.

The administrators almost totally agreed on the observed strengths of the programmatic activities in their schools, listing increased student awareness and attitude improvement as significant increases. The incidence of weaknesses reported in the first interview was increasing at the time of the Phase II interview. In fact, most of the listings had increased percentages about 15 percent. Principals expressed concern that no observable action had been taken to correct these recorded weaknesses.

Teacher Related Information

Table 5, Appendix B contains specific questions and responses on inservice and curriculum development activities of teachers as observed by administrators in Phase I. Of the principals 23 percent indicated two days of inservice were provided teachers, and 54 percent provided teachers released time for development of career-oriented materials. Of interest is the NR/NA category in Phase I--46 percent did not reply to the inservice question. Phase II principals stated teachers were provided inservice training the following number of days: none, 33.3 percent; one day, 41.7 percent; two days, 16.7 percent; more than five days, 8.3 percent. Only one (8.3 percent) principal did not reply.

Phase II responses show a percentage increase as to whether released time was provided teachers to develop curriculum material. Of those interviewed, 76.9 percent stated teachers were provided released time, as opposed to a 54 percent affirmative response in the first interview. A significant percentage of teachers responded negatively to this same question in the final interview. Of the teachers interviewed, 79.2 percent stated they were not provided released time to develop curriculum material.

All the administrators responded to the released time question in Phase II, 15.4 percent did not reply in Phase I.

Obviously confusion exists as to the time provided teachers for curriculum development activities. The discrepancy in the recorded responses of teachers and administrators suggests a communication problem exists between the two groups, or the days tallied by each are in error, or the question itself was interpreted differently by administrators and teachers.

Several principals stated they were not referring to written records when selecting the days of inservice training attended by teachers. They were not generally knowledgeable about the content of these sessions or the possible accomplishments achieved.

Single Change

Phase I and Phase II forms for every administrator interviewed asked the question, What single change would you make for career education in your school? The responses are presented in Tables 6 and 7, Appendix B.

HISD administrators in Phase I gave the following responses:

1. Expand service to students, 23.1 percent.
2. Involve more teachers, 15.4 percent.
3. Better student selection, 7.7 percent.
4. More material and resource centers, 7.7 percent.
5. Other, 15.4 percent (limit to social studies only, better pay, sponsored by HISD).
6. No response, 15.4 percent.

Although interviewees were asked to select one item, the majority marked several changes they would make at the time of the second interview. All responded to this question, and the responses were:

1. Expand services to students, 53.8 percent.
2. Involve more teachers, 30.8 percent.
3. Offer more guidance and counseling services, 23.1 percent.
4. Better teacher preparation, 23.1 percent.
5. More materials and resource centers, 23.1 percent.
6. Other, 7.7 percent.

The increases in desired changes are difficult to analyze because of the number of administrators in Phase II checking more than one item. Apparently the alternatives were considered so necessary that it was not possible to judge between them for a solitary selection.

The interviewees added items concerning better teacher preparation and the need for more guidance and counseling services to their list in Phase II, but did not select them in Phase I. On the other hand, the item for better student selection was not marked by any principal in Phase II, but 7.7 percent had chosen it in the first interview.

General Information

Field trips (study tours) appear in nearly every list of suggested activities for career education. All administrators thought they were important, but in Phase I, 46.2 percent did not respond when asked how many trips were scheduled. Phase II trips scheduled varied from none to six or more, with 30.8 percent most frequently stating one trip per semester was scheduled. The comment was made that teachers would be a better source for this information.

Of the Phase I interviewees, 53.8 percent said an advisory committee was working with them, and that figure increased to 58.3 percent in the last interview.

When asked what criteria are used to measure continuity of career education for grades K-12, 84.7 percent did not respond or did not feel the question was applicable. Those who did respond to this Phase I question listed these answers: K-6, OA only; 7-8, OA only; 10-12, occupational course; measured at Assistant Superintendent's Office, 5-year follow-up. The responses indicate the intent of the question was not understood; therefore, it was revised for Phase II forms to ask the principals if they knew whether there was a well defined plan for coordinating career education K-12 in their district: 53.8 percent answered yes, and 46.2 percent answered no.

In summary, administrators thought field trips related to career education were beneficial, but needed more money to increase the number scheduled. The project directors stated advisory committees were being selected to help plan career education activities and would be active some time after the beginning of the second semester, 1973. A significant percentage (46.2 percent) of the principals interviewed were not aware of the structure planned for coordination of career education K-12.

Summary

The career education objectives being implemented by the majority of the HISD administrators were concerned with the increased involvement of students and teachers in the programmatic activities. They felt that these objectives were realistic and could be achieved.

The RSD testing teams and monitors and the OA consultants were assigned the responsibility for being primary sources of information necessary to effect revision and constant updating of implementation methods and materials. Some confusion as to the duties of those assigned HISD personnel was reflected by administrator responses at the time of the first interview. This situation improved significantly, and after nine months of participation in this educational endeavor, two thirds of the principals were knowledgeable about the evaluation activities in their schools.

The primary criteria suggested for evaluative purposes concerned instruments recording measurable attitude and interest changes in students. These attitude changes were most often mentioned as being the strengths observed in the ongoing programs.

Nearly half of the administrators interviewed felt teachers should receive more training and more curriculum materials containing occupational information were needed at all levels. These listed weaknesses included a recognized need for more funds; i.e., to schedule more field trips.

The administrators interviewed suggested changes in their programs would be with regard to offering more services to students, securing more materials containing occupational information, and increasing the training for teachers.

The career education advisory committees were to become active during the second semester at all levels. The principals utilizing advisory committee services at the time of the first interview were primarily middle school administrators who worked with vocational education advisory groups. Nearly two thirds of the Phase II respondents were cooperating with Advisory Committees.

HISD was considering expansion of career education to 172 schools in the 1973-74 academic year. With almost half of the administrators reporting they were not aware of the plans for coordination K-12, it would appear this information has not been widely disseminated.

HARLANDALE INDEPENDENT SCHOOL DISTRICT (SAN ANTONIO)

The Harlandale ISD in San Antonio selected 22 project sites--18 elementary and 4 middle schools--for initial implementation of career education concepts. Counselors assigned to each school were supplemented by one more vocational counselor in each middle school and an additional four to rotate among the elementary schools. These trained counselors were to be the resource personnel to distribute curriculum guides. Audio-visual material, and any other material applicable to career education. Special orientation classes were developed at the sixth and seventh grade levels to provide a focal point for the investigation phase of the project.

A carefully selected staff of curriculum writers prepared and produced revised material under the direction of the project coordinator. The materials produced were introduced to teachers by counselors and the project coordinator in special meetings as well as on a non-scheduled basis.

Of the three funded school districts, Harlandale was the most advanced in preparation of curriculum materials at all grade levels.

The proposal for the elementary component of Harlandale ISD established several objectives:

1. To develop a sequential series of guides for the use of career development instructional materials in each grade level distributed to all teachers.
2. To organize and conduct training sessions for all teachers.
3. To develop and conduct a program of continuous evaluation and revision to assure that both material and methods are kept up to date.

The middle school component outlined these objectives:

1. To define guidance criteria in terms of student behavioral objectives.
2. To stress realistic program objectives.
3. To provide for corrective feedback based upon evaluation of achievements of the program.
4. To provide for adequate inservice training for all school personnel and community.

The placement component was to provide assistance to every student exiting from public school and a follow-up program was to be established for data retrieval on all students from grades eight to twelve.

The community involvement component would be the bridge between the school, the community, and business and industry. The primary objective would be dissemination of career development information outside the schools to the community leaders to gain their assistance and cooperation in making adjustments to the program.

University of Houston evaluation of this project included a minimum of two visits to the selected project sites for the purpose of conducting interviews with teachers, counselors, and administrators involved in implementing the career development program.

Personal visits were also made to the project directors, research specialist staff, members of the teacher task force and curriculum staff, and the coordinators of the placement and community involvement components.

The developed material was reviewed as were the pre- and post-test instruments utilized to evaluate student progress.

TEACHERS

Interviews were conducted with fifteen teachers in each of the four selected elementary schools and the two middle schools. The data secured in the Phase I interviews included responses from 86 teachers. An attempt was made to interview the same teachers five months later. These interviewees were not always available and some of the forms were incorrectly marked, so that the final number selected for data analysis in Phase II was 75. Detailed results from these interviews appear in Tables 1 and 2, Appendix B.

Objectives

Teachers were asked to list the objectives for career education in their schools in the Phase I form. Those mentioned most frequently were:

1. To familiarize students with a great vareity of job opportunities.
2. To guide students toward realistic career choices.
3. To emphasize the importance of developing a satisfactory self-image.
4. To help students realize their own talents and abilities.

These suggestions were categorized and presented in checklist form for respondents to the Phase II interview. Of the seven alternatives listed, the following received the highest number of responses:

1. Positive attitudes about work, school and society, 77.3 percent.
2. A comprehensive awareness of career options in the world of work, 68.0 percent.
3. A concept of self which is in keeping with a work oriented society, 57.3 percent.

Almost all of the teachers in both interviews felt the objectives could be achieved and 93 percent in Phase II said the objectives were realistic. The same question in Phase I had about 70 percent stating the objectives were unrealistic. The teachers in the last interview said the question should not have been phrased in the negative so some question exists as to the validity of the Phase I responses.

Of the respondents 96 percent indicated in both interviews that career education could help reduce the number of dropouts, and 90 percent thought it offers every individual a better chance to achieve job satisfaction.

In summary, the interviewed teachers indicated the most important objectives to be achieved in their schools concerned the development of acceptable student attitudes toward the world of work and the acquisition of information about the wide variety of career options. The respondents stated the objectives were realistic and could be achieved. They also thought the career development program could help reduce the number of dropouts and would be instrumental in offering every individual a better opportunity to achieve satisfaction in his chosen career.

Inservice

A primary objective to be achieved was the organizing and conducting of training sessions for all teachers for the purpose of integrating career development concepts into the total program of learning activities. Of the Phase I interviewees, 57 percent attended such sessions, but 45 percent declined to answer how many; 28 percent did attend one session. Phase II figures show 31 percent stated they had attended, 24 percent had attended at least one session, and 20 percent did not reply.

Teachers in Phase I named coordinators (25.8 percent) and counselors (38.4 percent) as conducting inservice sessions; 11.6 percent did not reply. The coordinator and counselors received about the same percentage (20 percent) of responses in Phase II; 19.4 percent did not reply.

Interviewees were asked if inservice sessions were necessary to understand the concepts of career education. The percentages in both interviews were about the same: 87 percent agreed, 10-12 percent disagreed.

Overall, inservice sessions were the principal means selected to train teachers in understanding and utilizing career education concepts. Over 40 percent of the teachers in the initial interview reported that they had not attended these sessions. This percentage had increased to 69 percent at the time of the final interview. With 87 percent of the teachers stating they considered the sessions necessary, the lack of organization and planning is apparent. As a consequence, a major proposal objective was not achieved.

Curriculum Materials

Sequential series of guides were to be developed for each grade level and distributed to teachers by counselors who would assist teachers in the use of all career development instructional material. Of the teachers interviewed, 27 percent were involved in material preparation, but 80 percent in Phase I reported that no released time was provided for this activity, and a comparable figure was recorded five months later.

Three-fourths of the teachers in Phase I reported receiving assistance in the use of the developed curriculum material. The counselor had helped 64 percent, and another 15 percent listed the coordinator and consultants as a source of help.

The Phase II question relating to the use of curriculum materials was formulated to determine the more specific procedures and methods which would illustrate teacher reaction to the materials received. When asked if the materials provided variety in making information more effective and realistic for students, 57 percent replied yes. In addition, 48 percent selected the item stating students are interested and impressed with the number of jobs available, and 47 percent said the materials had helped them understand how to teach and relate their subjects to career education. These and other responses are presented in Table 2, Appendix B. Teachers in both interviews thought lessons containing career information took more time to prepare.

In the first interview, the teachers were asked to list the procedures or techniques they recommended for selecting materials to be used in career education. The most frequently mentioned were:

1. Material should meet needs of individual students, 16.3 percent.
2. Choose materials of high interest level, 11.7 percent.
3. Materials should be relevant and current, 7 percent.
4. Use curriculum guide and audio-visual guide, 47 percent.
5. Material suited to community needs, 7 percent.
6. Teachers should be more involved in selection, 7 percent.

The Phase I responses of the Harlandale, Fort Worth, and Houston ISD teachers were incorporated in the following checklist for the Phase II interview form. The percentage of responses recorded by the Harlandale teachers when asked, "Of the procedures and techniques listed below, which ones would you recommend teachers use in selecting career education materials?" were as follows:

1. Select material which can easily be adapted to needs of individual students, 82.2 percent.
2. Choose material of high interest level, 63.0 percent.
3. Material should be relevant, timely and comprehensible, 64.4 percent.
4. Let counselors and consultants choose, 6.8 percent.
5. Entire staff should be involved in review and selection process, 20.5 percent.
6. Avoid essentially commercial material, 15.1 percent.
7. Carefully check the reading level, 50.7 percent.
8. Provide time for consultants to inform teachers about available material and proper use of it, 68.5 percent.

In summary, of the teachers reporting they were involved in curriculum preparation, only 20 percent had been provided released time. The majority stated the committees to which they were assigned had worked during the summer months of 1972 in this activity. Assistance in the use of the materials developed by the specialists was being provided by counselors and the coordinator. The teachers felt the materials were relevant, interesting to students, and helpful to them in correlating occupational information with regular curriculum presentations. Teachers were in general agreement that materials receiving their recommendations should be easily adaptable to student needs, relevant, and of a high interest level. In addition, almost 70 percent felt they needed more instruction in the use of the available material.

The Harlandale school district was in its second year of curriculum development, but their plan for disseminating the developed guides and training teachers in their proper use was not well organized.

Evaluation

Teachers in Phase I interviews were asked if career education in their schools was being evaluated by an in-house organization: 49 percent answered no, 18 percent answered yes, and 33 percent did not respond or said the question was not applicable. A very small number of teachers (5.8 percent) stated the career counselor was doing an evaluation, and several thought the principal was involved.

The lack of knowledge about evaluation activities in Phase I prompted the inclusion of a checklist in the Phase II interviews which provided teachers a selection of means for evaluating career education in their schools. The percentages below indicate those items most frequently marked:

1. Observation results by teachers, 55 percent.
2. Compare student interest with those not involved in career education, 45.3 percent.
3. Students, parents, teachers given opportunity to express their views on career education, 45.3 percent.
4. Establish follow-up program, 44.0 percent.

The project coordinator indicated pre- and post-tests to measure student behavioral changes were being developed and readied for distribution during the time the Phase I interviews were taking place. Teachers did not, at any time, indicate they were recording data for evaluation purposes and were not aware of any student testing material.

Overall, the responses recorded in this category indicate confusion and lack of information by teachers who have responsibility for the implementation of career education concepts and are the primary school contact for students. While the pre- and post-inventory tests developed to measure student progress K-12 were to be distributed to project schools some time after the first University of Houston interview and before the close of the 1972-73 school year. None of the teachers interviewed were aware of the student testing program, and only about one-fourth of them chose such tests as a means of evaluating career education in their schools. In fact, more than half of the respondents stated observation results by teachers should be used for evaluation.

Student Awareness

Phase I respondents were asked if their students had observed career education activities in other schools--92 percent in Phase I and 97 percent in Phase II answered in the negative.

More than 70 percent of the Phase I responses indicate that teachers thought students were noticeably more aware of career opportunities, and over 50 percent said students were making wiser career choices. However, so many teachers failed to respond to these statements (47 percent for both) they were not included in the final questionnaire.

When asked what student outcomes they anticipated as a result of experiences in career education, Phase I teachers responded as follows:

1. A broad awareness of people and their jobs, 21 percent.
2. Making wise career choices, 16 percent.
3. Better understanding of why school is important, 8 percent.
4. Encourage interest in jobs and success, 7 percent.
5. Importance of all work, 11 percent.

The Harlandale responses were added to those from teachers in the other districts interviewed, and a checklist was devised for Phase II respondents on the same topic. A complete data presentation may be found in Table 2, Appendix B, but a few are listed below:

1. Students will be familiar with a wide variety of job opportunities, 81.3 percent.
2. Students will have a greater awareness of themselves and their role in society, 70.7 percent.
3. Students will possess a broader knowledge of the importance of making a wise career choice, 62.7 percent.
4. Students should develop a better understanding of why academic subjects are important, 60 percent.

Overall, the Harlandale teachers had not discussed the possibility of observing career education activities in other schools, and the majority said such visits would be very difficult to schedule. The large percentage of teachers failing to reply to questions concerning student awareness seemed an indication of their lack of information about implementation activities in their schools.

The student outcomes anticipated by teachers concerned knowledge of a wide variety of jobs, the importance of wise career choices, development of acceptable attitudes, and an understanding of the relationship between all education and career education concepts.

Techniques and Procedures

More than 70 percent of the teachers in both interviews stated occupational information should be included in all subject matter presentations; however, 56 percent of those interviewed reported they were not utilizing this approach. Another 90 percent thought college courses should include career education concepts.

When Phase I teachers were asked to check facilities which were available since the implementation of the career development program, three-fourths selected community resource personnel, almost half were designing and maintaining career information bulletin boards, and a third were using audio-visual material which had not formerly been available.

The interviewees listed the following procedures and techniques they were using in teaching career education concepts which were different from those formerly used:

1. Using activities suggested in curriculum guides.
2. Using career awareness in subjects other than social studies.
3. More material and personnel would furnish information and opportunities to use them.

4. Career counselor teaches about careers.
5. Plan to use resource people from community.

The rephrased question in the Phase II form asked for procedures used only in teaching career education concepts. Some of the responses most frequently selected were:

1. Using activities suggested in curriculum guides, 44.4 percent.
2. Making career information part of every subject taught, 38.7 percent.
3. More practical discussions of attitudes and opportunities for achieving success in adult life, 40 percent.
4. Using community resource people, 32 percent.

In summary, although Harlandale teachers stated occupational information should be included in all subject matter presentations, less than half were doing so. Those interviewed mentioned they were using techniques suggested in the curriculum guides and having more practical discussions with their students in teaching career education concepts. Teachers in both interviews thought the bulletin boards with career information themes were of interest to students and were a good medium for advertising activities. The increase in the amount of related audio-visual material was mentioned frequently as a source of student motivation. Several classrooms of elementary students set up and operated grocery stores and one class made and sold bean bags. There appear to be more job related activities, but teaching procedures remain basically the same, regardless of subject matter content.

Single Change

Teachers were asked what single change they would make for career education in their schools. Phase I responses were: 15 percent, no response; 35 percent, no change; 9 percent, expand student services; 5.8 percent, offer more courseling and guidance services; 7 percent, better teacher preparation; 12.8 percent, more material and resource centers; and 15 percent other. Suggestions in the "other" category included more money needed for field trips, more career counselors in both elementary and middle schools available on a full-time basis, and more emphasis for the program.

All respondents answered this question in Phase II. The responses were: 14.7 percent, no change; 17.3 percent, expand services to students; 20 percent, involve more teachers; 45.3 percent, offer more guidance and counseling services; 42.7 percent, better teacher preparation; 2.7 percent, better selection of students; 28 percent, more materials and resource centers; 4 percent, drop the program; 9.3 percent, other. This last item was still concerned with money for field trips and more knowledge about how to implement.

A category not marked in Phase I was listed by 20 percent in Phase II--involvement of more teachers. Other changes from one interview to another were the increased percentages in counseling services needed, increase in need for materials and resource centers, increase in expansion of services to students, increase in better teacher preparation, and a decrease in those indicating no change was needed.

Apparently the more involved the teachers become, the greater awareness of their need for assistance. It may also be assumed that many teachers had not realized the importance of the career development program until the evaluation interviews were conducted. Of particular interest is the 43 percent who checked the need for better teacher preparation. Indicators of this type should be helpful to those charged with the increased implementation of career education into every school level. Another indication of teacher attitudes toward career education is that 49 percent agreed that teacher participation in the program should be voluntary, but that percentage had increased to 62 percent at the time of the Phase II interviews.

Summary

The teachers interviewed for this project stated the primary objectives for the career development program in their schools were to help students develop acceptable attitudes toward the world of work and to help the students acquire information about the wide variety of available career options. Although the teachers felt the objectives were realistic, 69 percent did not attend the inservice sessions designed to explain implementation activities which would lead to achievement of the objectives. Teachers were, in many instances, uninformed about the developmental activities of career education in their own schools. From an administrative standpoint, the sparse attendance at the inservice sessions indicates poor planning and organization of this important element.

Harlandale ISD was in its second year of career oriented curriculum development. The teachers agreed that the guides they received were timely, relevant, interesting, and motivating; however, the printing and distribution of the materials to all teachers was uncertain. As a consequence, many teachers were not instructed in the most effective use of these guides. The delays in printing and distributing the curriculum guides were attributed to delays in releasing budgetary allocations at the district office. Although the materials were carefully researched and well developed, too many teachers were not using them.

The necessary evaluation procedures for reporting progress were neither clearly understood nor utilized by teachers if they existed. The data resulting from student pre-tests indicated no significant change had occurred. The comparison data between pre- and post-test scores were not available. More than half of the teachers agreed that evaluation should be based on teacher observation.

Teachers listed familiarity with many occupations, ability to make wiser career choices, and the development of a good self-image as the outcomes they anticipated for their students.

Occupational information should be infused with all subject matter presentations according to three-fourths of those interviewed; but over half of these teachers reported they were not following this procedure. The majority of the teachers using the curriculum guides thought the listed activities provided effective teaching techniques.

Increases were recorded in all the items selected for a single change by the teachers. In particular, a need for better preparation of teachers was recognized by almost half of the respondents.

The majority of the teachers in Harlandale ISD appear to be dedicated, innovative, inquiring and interested. Also, they like the concepts of career education when they understand them, and ask for help in presenting information with which they are not always familiar.

During the last interview, teachers were expressing concern about the refunding of career education for another year. Some of the curriculum guides were received late in the 1972-73 school year and the teachers felt they needed organized training sessions to learn to use them most effectively.

COUNSELORS

Four elementary and six middle school counselors were contacted in Phase I and Phase II. Data are recorded from ten forms in Phase I. Two forms were not returned in Phase II, and two were only partially answered, resulting in six forms available for data analysis. Answers to all counselor interviews appear in Tables 3 and 4, Appendix B.

Inservice

Only one counselor did not attend inservice sessions for career education during the 18 months of the project. Of the 90 percent participating, 50 percent attended eight or more sessions in Phase I, and the percentage increased to 80 percent in Phase II. All the counselors stated their own knowledge of occupational information had increased.

In summary, the counselors were assigned the responsibility for assisting teachers in their schools to implement the career development program. Their attendance at inservice meetings indicates their awareness of the importance of these sessions.

Student Services

Counselors were asked whether they maintained comprehensive files of: educational opportunities--60 percent yes, 40 percent no response; current occupational information--80 percent yes, 20 percent no response; community educational opportunities--70 percent yes, 30 percent no response; local job opportunities--50 percent yes, 50 percent no response. Basically, the same question was included in the Phase II interview form and all the counselors responded in the affirmative to all questions.

Phase I respondents (70 percent) were interviewing each student on an individual basis at least once a year, but only 33 percent were continuing this practice at the time of the Phase II interview. Provision was made for counselors to hold group meetings with students by grade and subject matter levels. The latter were primarily with social studies classes where the first implementation activities occurred.

When the counselors were asked if employment opportunities were available to students below age 14, 50 percent answered no, 30 percent said yes, and 20 percent did not reply in the Phase I interview. The Phase II interviewees were asked to select any procedure used to obtain employment for students 14 years of age and under--50 percent stated referrals were made to the school placement office, 33 percent said there were no procedures available to their students, and 16.7 percent said counselors tried to help.

To summarize, almost half of the counselors in Phase I did not reply to questions relating to the types of information files maintained by them. However, by the time of the last interview, all of the counselors reported they were collecting and maintaining extensive files of occupational information and material. Students were advised periodically of additions to these centers, and special sections in the libraries were devoted to career related books.

Harlandale ISD has a large number of students from low income families, and an awareness of job opportunities for those 14 years of age or younger is needed. Many students must drop out of school in the middle grades to help supplement the family income. Part-time jobs after school hours and on weekends which do not have age and/or insurance limits could help solve the problem. However, 50 percent in Phase I and 67 percent in Phase II did not know where such information could be attained. Some counselors thought the placement office might offer some help.

Testing

In both interviews, 80 percent of the counselors stated standardized tests were being used and 20 percent stated there was no formal testing program or did not reply. Phase I interviewees listed IQ and achievement tests being administered to seventh grade students, COPS to eighth grade students, GATB in the middle grades (on request), and CTBS and SFTAA to students in third, fifth, seventh, and ninth grades. The Phase II interviews asked how their testing program was described, and they again selected standardized tests. Career Inventory pre-tests were also given to selected groups of students at all grade levels. The tests were developed by the staff of the career education center and consisted of three instruments--Pre-Inventory K-2, Pre-Inventory 3-5, Pre-Inventory 6-12. Similar instruments were administered at the end of the 1972-73 school year.

In general, the Harlandale counselors were using a variety of standardized tests for students at all grade levels. There had been no change in their standard testing procedure since the implementation of career education. The curriculum specialists staff in the career education center had developed tests which would indicate the career information possessed by students. The counselors had not reported the analysis of the testing results at the end of the evaluation period.

Evaluation

Phase I counselors were asked to state criteria they believed relevant for evaluating career education. While 30 percent did not reply, some of the other responses were:

1. More relevant materials for middle school use.
2. Quantitative data on job placement and job retention by students with career development experience, student requests for career courses, and student requests for occupational information.
3. Results from tests measuring student interests and desires.
4. Coordination of middle and high school programs.

Phase II respondents checked alternatives they believed applicable for evaluating career education in their schools. Most frequently selected were:

1. Students, parents, and teachers given opportunity to express their views on career education, 66.7 percent.
2. Compare student interest with those not involved in career education, 50 percent.

3. Establish follow-up program, 50 percent.

4. Evaluate effectiveness of inservice sessions, 50 percent.

The total responses are presented in Table 4, Appendix B.

Phase I interview forms provided counselors an opportunity to agree or disagree that students involved in career education were making more realistic career choices--60 percent agreed, 40 percent did not respond; 80 percent in Phase II agreed. In both interviews, 90 percent thought study tours (field trips) would increase student interest in career education.

Only 20 percent of the Phase I counselors were working with an advisory committee, but the 83 percent recorded in Phase II shows a significant increase. This increase is probably related to the substantial efforts of the Community Involvement Coordinator to enlist qualified business and community leaders in advisory committee projects.

In general, the Harlandale counselors stated evaluation of the career development program could be effected by the development of instruments to measure student attitude changes and the collection of quantitative data on student enrollment, requests for occupational information, and job placement figures. One counselor (16.7 percent) stated evaluation should be based on program objectives.

There was a 20 percent increase recorded for counselors stating students were making wiser career choices as a result of their experiences in the career development program. A significant increase (60 percent) was noted in the counselors working with advisory committees. The Community Involvement Coordinator had appeared before a number of civic groups and the interest of the business community appears evident.

The revision of the activities of the counseling staffs was an annual project. However, the Harlandale counselors expressed uncertainty as to the continuation of the career development program which affected their planning for the coming school year, 1973-74.

Occupational Information

About 90 percent of the responses in both interviews indicated counselors believed students were more aware of occupational opportunities and were seeking more information related to careers. In Phase I, 90 percent agreed that academic teachers were including more career information in their presentations, but that figure dropped to 50 percent agreement in Phase II.

Counselors were asked how they projected future occupational requirements in their area. Phase I responses were:

1. 50 percent did not reply.
2. 20 percent said job placement office handled this information.
3. 10 percent said there would be a greater need for skilled workers.
4. 10 percent thought students should be taught to think.
5. 10 percent said the age limit should be moved from 16 to 15.

The Phase II form contained a checklist of sources for information about jobs available in five to ten years. The percentage of counselors selecting each item follows:

1. 16.7 percent, current trade journals.
2. 16.7 percent, Employment Commission.
3. 50 percent, school placement officers.
4. 50 percent, local Chamber of Commerce.
5. 33.3 percent, U. S. Department of Labor.
6. 16.7 percent, community business leaders.

In summary, the majority of the counselors reported an increase in student requests for occupational information, and they believed students were more aware of career opportunities since career education had been implemented. The 40 percent decrease in the number of academic teachers correlating occupational information was believed by the counselors to be attributable to delayed deliveries of curriculum guides, lack of time to properly train teachers in the use of material, and uncertainty about the future of the career development program.

The middle school counselors were showing considerable aptitude in responding to teacher and student requests for occupational information and performing an increasing number of clerical duties related to career development activities. Rotating counselors in elementary schools are dedicated individuals, but the demands on their time are burdensome. Resource teachers do supplement elementary counselor efforts.

Single Change

Counselors were relatively consistent in responding to suggestions for a single change they would make in career education in their schools. Phase I responses: no reply, 20 percent; expand student services, 20 percent; involve more teachers, 40 percent; offer more guidance and counseling services, 10 percent; better teacher preparation, 10 percent. The items marked by counselors in the Phase II interview were: no change, 16.7 percent; involve more teachers, 33.3 percent; offer more guidance and counseling services, 16.7 percent; better teacher preparation, 33.3 percent; more materials and resource centers, 16.7 percent.

Overall, counselors in both interviews stated more teachers should be involved in the career development activities. In the last interview there was recorded a 20 percent increase in the number who felt the teachers should be better prepared. The Harlandale program had not considered using career centers in selected schools because the counselor's offices contained all the occupational information available to students.

Summary

Inservice sessions for career education were well attended by the Harlandale counselors, and they were familiar with concepts and objectives of the ongoing career development program.

The middle school counselors maintained files of current educational and occupational information which was available to students upon request. Many students made unscheduled visits to the counselors' offices to examine materials, as well as attending scheduled conferences. The number of students needing part-time jobs is a problem which the counselors would like to solve. There is no established procedure for helping students 14 years of age or under find part-time employment.

Standardized tests were used at all grade levels to assist counselors in suggesting curriculum choices as well as possible career choices to their students. Tests to measure student interest in and knowledge of career opportunities and gathering of quantitative data on enrollment and requests for information were selected as criteria for evaluating programmatic activities. The results of the pre- and post-inventory student testing were not available to counselors by the end of school, 1972-73. The single change most frequently desired by a majority of the counselors related to the increase in the number of teachers involved in the implementation activities.

The work of the Community Involvement Coordinator was becoming apparent in the increase of business and community leaders as resource speakers and of those serving as members of advsiory committees to assist counselors in planning implementation activities.

Harlandale counselors were selected as the major source for transmitting information and material from the career education coordinator and staff to the teachers. They have performed admirably in the schools selected for more intense observation within the constraints imposed by delays in receiving promised materials and lack of coordination of implementation efforts at the administrative level.

Uncertainty over continuation of the program beyond the contracted date slowed planning in guidance and counseling activities considerably. The counselors interviewed believe the career development program offers the most benefit to the greatest number of students of any with which they have been involved. They wanted to continue their efforts and expand their career information centers for use by the neighborhood community.

ADMINISTRATORS

Six school sites (four elementary, two middle) were randomly selected for more intense observation and data gathering purposes. Phase I interview returns (10) included responses from program coordinators as well as principals of participating schools. Phase II returns (5) do not offer as varied a response pattern as had been anticipated (three forms were not returned and two were not completed). Answers to all administrator questionnaires appear in Tables 5 and 6, Appendix B.

Objectives

All the Phase I respondents stated career education objectives were in accord with objectives for their total school program and could be achieved. The objectives most frequently mentioned were:

1. To help the student be socially acceptable and therefore "job acceptable".
2. To develop positive attitudes toward the world of work.
3. To make students aware of the wide variety of occupations.
4. To help students realize their interests and talents.

The alternatives selected in the Phase II interview forms show the same objectives are considered desirable and important.

Administrators in both interviews were asked to indicate the direction they felt career education should take in the future. The items selected by Phase I respondents include:

1. Greater involvement of business and professional community.
2. Should be an integral part of all formal education.
3. Teacher training institutions should incorporate career education concepts in their courses.
4. More supervisory personnel should be involved.

Phase II responses listed in Table 6, Appendix B, show the same items receiving the highest percentages.

Interestingly enough, none of the administrators thought all the schools should become totally involved in career education implementation. They stated all efforts should be coordinated, and time was needed to examine all aspects of the program more thoroughly. During the last visit, principals had not been given any information from the district superintendent as to continuation of the program next year.

In summary, the administrators believe the objectives of career education are realistic and can be achieved. The development of positive attitudes by students and student awareness of the variety of occupations were generally determined to be the primary objectives for achievement in the 1972-73 school year. The respondents indicated career education in the future should involve more business and community leaders and should be an integral part of all formal education. However, the principals stated time was needed to evaluate implementation activities before a total school effort was undertaken. The uncertainty as to the continued funding of the career development program was a matter of concern to all the principals and coordinators.

Evaluation

All the administrators indicated some evaluation of career education was being performed, although there was no agreement as to the source. Most frequently mentioned procedures involved pre- and post-testing of students. There was no indication that project coordinators were gathering data other than those requested in the regular monthly reports from all school personnel. The Community Involvement Coordinator and Placement Director had developed appropriate forms to measure the progress of their components.

When asked what means should be used for evaluating career education, Phase I respondents listed the following:

1. Successful job placement, 20 percent.
2. Teacher and student attitude surveys, 40 percent.
3. Increase in student knowledge, 20 percent.
4. Periodic discussions between project directors, principals, counselors and teachers, 30 percent.
5. Project objectives, 10 percent.
6. No response, 30 percent.

These items were incorporated in a checklist for the Phase II interview, and there was no significant change in the responses. However, three (60 percent) of the five interviewed thought consultants and counselors should provide the means for evaluation. The data are in Table 6, Appendix B.

Data from both interviews indicated that inadequate funding and insufficiently trained teachers were the most common weaknesses of career education. Most principals thought field trips were necessary but had no money set aside for this purpose. Several respondents felt more time and money should have been allocated to development of curriculum materials although this emphasis had received funding in prior projects, and the present proposal had allocated a sizeable sum for this component.

Responses in both interviews concerning strengths of career education tended to show agreement on higher student interest, better and earlier understanding of the world of work, and relevance of produced and developed curriculum materials. Most (90 percent) of the principals selected the services of counselors to teachers as a high priority item.

The general consensus of the responses of a majority of the Harlandale administrators was that no coordinated evaluation procedure was being conducted by the district for all phases of the career development program. The respondents suggested evaluative criteria should include instruments for measuring student and teacher attitudes, and those for collecting quantitative data of student progress. The placement coordinator and the coordinator for community involvement had developed quantitative measures for their components.

The strengths of the program cited by the principals included the involvement activities of the counselors, the relevance of the curriculum materials developed, and the increase in student interest in career education. The observed weaknesses referred to need for more time and money to complete the development of all proposed curriculum guides, and the need for more effective training of teachers.

Teacher Related Information

Teachers were not provided time for inservice sessions for career education according to 60 percent of the Phase I respondents, but one project coordinator said 50 percent of the pre-school inservice emphasis was on career education. Only one (10 percent) Phase I respondent stated teachers were provided released time for development of career education materials, but 70 percent indicated teachers should receive extra remuneration for such activities.

Of the five administrators returning Phase II interview forms, one (20 percent) did not respond when asked how many days inservice training in career education were provided teachers. Two others (40 percent) said none were provided and the remaining two (40 percent) said teachers had one day. All five said no released time was provided teachers for development of career education curriculum materials. One (20 percent) did state that teachers were supposed to use their 45-minute planning period for activities of this nature.

In summary, teachers attended inservice sessions for career education during pre-school activities rather than being provided released time during school day operations. The teachers assigned to committees for development of career education curriculum material apparently worked during professional days, weekends, or planning periods during the school day.

Single Change

When asked what single change they would make for career education in their school, responses by those interviewed in Phase I were:

1. No reply, 10 percent.
2. None at this time, 40 percent.
3. Increase number of teachers involved, 10 percent.
4. More guidance and counseling services, 10 percent.
5. Better teacher preparation, 10 percent.
6. Other, 20 percent--these suggested continued funding should be provided.

Two (40 percent) of the Phase II principals checked more counseling service, two (40 percent) said more teachers should be involved, and the other (20 percent) thought no change was needed.

Overall, data show an increase in responses by administrators to the question of suggesting a single change for career education in their schools from one interview period to the other. In particular, the principals stated more teachers should be involved, and more student counseling services should be provided. Apparently the program had not been in operation long enough for the principals to feel any change was needed at the time of the first interview.

General Information

Of the administrators in each interview, 60 percent stated local advisory committees were not participating in career education planning. About this same number had also indicated they felt there should be more community involvement.

Phase I responses to criteria used to measure continuity K-12 for career education included the following quoted statements:

1. Attitudes improve.
2. Knowledge increases as program continues.
3. Elementary methods and resource guide.
4. Program provided for every student K-12.
5. Teachers involvement and attitude measured by surveys.

These responses are evidently the result of misinterpreting the question. The Phase II form provided administrators an opportunity to state that there was a well defined plan for coordinating career education K-12.

All of the interviewees stated study tours (field trips) were an integral part of career education. When asked how many tours were scheduled at the time of the Phase I interview, 40 percent said eight or more, 20 percent said none, 20 percent said two, and 20 percent said three. In Phase II, 80 percent said six or more tours were scheduled in the second semester.

Generally, the administrators were requesting more activities which would involve members of the business and industrial community. At the same time, they stated that less than half of the schools were using advisory committees in planning career development activities. The respondents in the first interview had apparently misunderstood the intent of the question concerned with K-12 continuity, so the rephrased question asked if they were aware of a coordinated K-12 plan for career education in the Harlandale ISD. All but one of the principals responded in the affirmative. Field trips were scheduled for classes at each grade level but the responses indicate there needed to be more money provided for this activity.

Summary

The Harlandale administrators stated the primary objectives, which could be achieved because they were realistic, were concerned with helping students develop positive attitudes toward themselves and the world of work and presenting students with an abundance of occupational information. Their suggested directions for future career development activities were an increased involvement of the community and more integration of the concepts into all formal education.

A well organized evaluation procedure was not apparent to principals who thought teacher and student attitudes were important, and also stated there was a need for instruments to measure student progress by quantitative means.

The curriculum materials were believed by the administrators to contain relevant information of value to the career development program. They appreciated the efforts of the counselors and thought students were interested in the career activities. The principals stated there was a need for continued funding as well as more effective training sessions for teachers.

Administrators reported that teachers were not generally provided released time for inservice sessions or development of curriculum material for career education. However, the administrators consistently said teachers needed more training both to understand career development activities and to effectively use the prepared curriculum guides developed by the district. Those interviewed reported they thought more teachers should be involved and there should also be an increase in services to students.

There appeared to be an increase in the involvement of advisory committees or such involvement was planned. The community coordinator was also recording positive results with community leaders.

The administrators said there was a well defined plan for coordinating career education K-12 in the Harlandale Independent School District.

The Harlandale administrators relied principally on the counselors to supply them with information concerning the career development program. Frequent visits were made to the participating schools by the project director supervising the staff of curriculum specialists and the career counselors. This director also coordinated efforts to deliver the developed curriculum materials to the counselors for distribution to teachers. Another responsibility of this position was scheduling, planning and conducting inservice sessions for all interested school and community personnel.

Halfway through the three-year project, there was a change of superintendents in the district which may have been a contributing factor to the communication problem mentioned by all those interviewed.

Principals themselves were very concerned about whether the program would be refunded, and in late May still could not completely assure their trained staff who were implementing career education that their positions were secure.

According to the administrators, the interviews presented them with their first coordinated means for examining their own efforts and offered suggestions for the data which could conceivably be requested by their superintendents or others in a position of authority.

COMMUNITY INVOLVEMENT AND PLACEMENT COMPONENTS

Data for evaluation of the Community Involvement Component and the Placement Component of the Harlandale ISD proposal were presented by the coordinators in personal interviews.

The community involvement program is explained to school personnel in career education inservice sessions and participants are supplied a guide listing 210 community contacts available as resource speakers or information sources. The coordinator works closely with civic groups, business leaders, area colleges and universities, and personnel attached to the five military establishments within the immediate vicinity of San Antonio. As a result of his efforts, Award Certificates are presented to community leaders for outstanding service to the career education effort, and the Chamber of Commerce adopted a career education policy statement.

The community involvement coordinator works closely with the placement coordinator in an effort to explore every possible resource for advancement of the career education concept in San Antonio. The job placement officer has revised and developed new forms for more efficient data gathering and more rapid retrieval of desired information.

Teachers are instructed in the pre-school inservice sessions as to the types of information and service available to students in the placement office. Individual and group meetings are held with students and various media are used to provide updated job opportunity information. Assistance is offered to students from middle school to post high school age in job placement and continued education. A computerized follow-up program is in effect for graduates and dropouts. Every possible community resource is utilized to maintain current job market information and inform potential employers of those potential employees.

The coordinators suggested as the single change they would make in career education that ninth to eleventh grade students should be allowed to observe a job of their choice several hours a week without pay or credit.

Teachers are making more referrals for student placement since implementation of career education and students are making more realistic career choices.

Both coordinators expressed a desire to share office space to facilitate and better coordinate their efforts.

In summary, the Community Involvement Coordinator and the Placement Coordinator have developed forms for gathering quantitative data on enrollment, achievements, and placement for all exiting students in the Harlandale Independent School District. In addition, continuous contact is maintained with business and industrial leaders in the community to apprise them of the concepts and activities of career education being emphasized in the project sites. Lists of community resource personnel have been assembled and distributed to teachers. Advisory committee members from the business community are actively involved in planning career education activities.

The unique presence of five military establishments in the San Antonio area offers expanded opportunities for career exploration by interested students. A carefully planned follow-up program offers data on student educational and occupational choices over a five year period. Seminars and group discussions were scheduled by the coordinators with civic groups and industry representatives to establish a communication system whereby files of job opportunities and potential employees would be available for quick reference. The coordinators exchange ideas and information daily and would prefer that office facilities be consolidated for their combined assignments.

FORT WORTH INDEPENDENT SCHOOL DISTRICT

The Fort Worth project was divided into two phases, planning and implementation. The purpose of the planning phase was to establish an initial set of objectives and processes for each component of the project which in one year could create a strong base for a total career education involvement in the Fort Worth Public Schools. The key emphasis for the first year was to initiate an attitude of acceptance and importance for career education in the total program on the part of teachers, counselors, administrators, parents, the business community, and students.

Literature research, curriculum revision, and experimental procedures for using career oriented materials were major objectives for the elementary school component. Special classes were structured for sixth grade students in occupational investigation and infusion of career education concepts into all subject areas was a goal determined for high school.

The project sites selected for career education implementation activities included four elementary schools, two high schools and two middle schools. Vocational counselors were assigned to each high school, one to the two middle schools and one to the four elementary schools. The high school and middle school counselors were to equip and maintain career information centers for the use of interested teachers and students. All of the counselors would be seeking the support of the business and industrial community in providing for appropriate study tours and occupational information and resource speakers.

TEACHERS

Fifteen teachers from each of the four elementary schools, two middle schools, and two high schools participating in the career education project were randomly selected for interview purposes by the University of Houston project evaluator.

The Phase I data are recorded from 119 interview forms and the Phase II data are recorded from 94 interview forms. The decrease in the number of forms used for data purposes in Phase II is attributable to several causes: failure to return forms, incomplete forms returned, and absences during the interview time. Detailed answers to all teacher interview forms appear in Tables 1 and 2, Appendix B.

Objectives

Teachers in Phase I interviews were asked to identify the career education objectives for their schools. The majority of those responding listed the following objectives:

1. To help students become more aware of the variety of occupations.
2. To help students develop the skills necessary to enter employment after leaving school.
3. To help students gain information which would enable them to make wise career choices.

The listed objectives provided in the Phase II interview enabled respondents to make choices most nearly describing their understanding of career education objectives. The listed items receiving the highest percentage of responses were:

1. Positive attitudes about work, school and society, 91.4 percent.
2. A comprehensive awareness of career options in the world of work, 78.5 percent.

3. A concept of self which is in keeping with a work oriented society, 74.2 percent.

4. A realistic understanding of the relationship between the world of work and education, 74.2 percent.

Approximately 95 percent of the teachers responding to both interviews agreed that career education offered every individual a better chance to achieve job satisfaction, and about the same number felt this program could reduce the number of dropouts and possibly help solve the unemployment problems in their area.

The majority (85 percent) of the teachers agreed that many high-salaried jobs do not necessarily require college degrees. When the teachers were asked if they thought the career education objectives were realistic and could be achieved, more than 95 percent of those responding answered in the affirmative. About 6 percent in each interview did not reply.

Overall, the majority of those responding felt students would develop positive attitudes about work, school, and society and would also increase their awareness of the variety of career options through career education activities.

The respondents stated the career education objectives were realistic and could be achieved. They also agreed college degrees were not always necessary to obtain jobs which pay well. The implementation of career education activities should help solve the dropout problem according to the teachers interviewed. Almost all of the teachers thought career education offered every individual an opportunity to achieve job satisfaction.

Inservice

In the first interview, 79 percent reported attending inservice sessions for career education, and the average number of sessions attended fell between one and two. Fifty percent indicated the sessions were conducted by a counselor. The relatively large percentage (30 percent) selecting "others," indicated conductors were other teachers, and in a few instances, state agency personnel.

Phase II data show 80 percent of the teachers stating inservice training was provided the second semester. Of those replying, 48 percent attended one day; 23 percent, two days; and other responses were scattered up to eight days. The respondents were asked who conducted the meetings. Those listed were: coordinator, 21.8 percent; principal, 19.4 percent; consultant, 29 percent; counselor, 24.7 percent; other, 31.2 percent. The other category refers to other teachers and TEA personnel.

In both interviews, 90 percent stated they felt inservice sessions were necessary to understand and utilize the concepts of career education, but less than half thought the sessions had provided this information.

In summary, inservice training sessions had been designated as the primary method for gaining teacher commitment to the concepts of career education. However, when 20 percent of the interviewees did not attend any meetings, and another 5 percent did not reply to the question, these data suggest that less than total agreement to the implementation activities had been achieved. The variety of personnel reported conducting the sessions indicates the absence of a totally organized procedure for imparting necessary information to teachers concerning career education.

Curriculum Materials

About 25 percent of those interviewed in Phase I had prepared curriculum materials, and half of that number had been given released time, up to six days, to help in that endeavor. In the Phase II interview, 40 percent thought teachers had been provided released time. More than two-thirds stated teachers should receive extra pay for this work. Data from both time points indicate over half the teachers thought more time was required to prepare lessons with occupational content.

Of the Phase I respondents, 65 percent said they had received assistance with curriculum materials: 37 percent listed the counselor, 13 percent listed the coordinator, and 15 percent listed the consultant as providing help. When these teachers were asked if they thought the career oriented curriculum materials had been helpful, 16 percent did not reply, and 73 percent answered in the affirmative.

The responses listed below indicate some of the ways in which the materials helped:

1. Acquainted me with available materials.
2. Helped identify different careers available to students.
3. Provided variety in making the program more effective and realistic for students.

Teachers interviewed in Phase II were provided a checklist of items which expressed their reaction to career education curriculum materials. Those most often selected were:

1. Provided variety in making information more effective and realistic for students, 65.6 percent.
2. Students are interested and impressed with number of jobs available, 55.9 percent.
3. Helped me understand how to teach and relate my subject to career education, 55.9 percent.

Teachers mentioned the following procedures and techniques they would recommend for selecting curriculum materials: use suggestions in the curriculum guide, talk to people in industry, consult the counselor, check the reading level, must meet student needs, must be relevant and interesting. These Phase I responses were incorporated in a list of items to enable Phase II teachers to make a selection of recommended procedures. The items most frequently checked:

1. Select material which can be easily adapted to needs of individual students, 87.9 percent.
2. Material should be relevant, timely and comprehensible, 83.5 percent.
3. Choose material of high interest level, 76.9 percent.

In summary, teachers were reporting an increase of 15 percent in released time provided for teachers to develop career education curriculum materials between the two interviews. About half of the interviewees thought more time was needed to prepare lessons which incorporate occupational information.

The majority of the teachers thought the curriculum materials they received had been helpful in providing occupational information to students, motivating student interest, and helping them relate occupational information to other subject matter.

The procedures which teachers suggested they would use to select appropriate curriculum materials included choosing interesting material which is relevant and adaptable to individual student needs.

Evaluation

While 71 percent of the interviewees in Phase I were not aware of any in-house evaluation, 22 percent did not answer this question. A rephrased statement in the second interview provided a number of alternatives for evaluating career education. The Fort Worth teachers most frequently checked the following items:

1. Establish a follow-up program, 53.8 percent.
2. Students, parents, teachers given an opportunity to express their views on career education, 53.8 percent.
3. Observation results by teachers, 52.7 percent.
4. Instruments which would measure student attitudes toward the world of work, 49.5 percent.

Middle school teachers with occupational orientation classes for the sixth grade seemed to be the only faculty members aware of the need for data to be gathered and reported for measuring the progress of career education implementation efforts.

In summary, only 10 percent of the teachers interviewed reported knowledge of in-house evaluation activities. Of this number, 1.7 percent said the teachers were doing the evaluation. In selecting means for evaluating career education programs, teachers most frequently mentioned that there should be a follow-up program, and students and parents should be involved in discussions as well as teachers. The middle school teachers were recording quantitative data about student visits to the career centers, requests for career information, and the use of the audio-visual materials and student reactions to this material.

Student Awareness

The Fort Worth proposal stated students would be given an opportunity to observe career education activities in other schools, particularly if career choice subjects were not available in their own schools. Of the teachers, 85 percent stated no such visits were made, and 14 percent did not respond at all in Phase I. The question was repeated in Phase II interview form and 3.6 percent said visits were made; 96.4 percent replied no visits were made.

The majority felt students were more aware of career opportunities since the inception of career education activities because students demonstrated more interest in discussions about careers which were new to them, and the records of the career centers showed steady increases in attendance and material usage. The career centers were furnished, maintained and operated by the counselors assigned to the middle schools and high schools. These centers were available to students and teachers throughout the school day, and entire classes, as well as individual students, used the centers and the materials.

The teachers in the first interview were asked what student outcomes were anticipated as a result of experiences in career education. Some of the replies are listed below:

1. Students will have better knowledge of the world of work.
2. Students will be familiar with the variety of job opportunities.
3. Students will develop a greater awareness of themselves.
4. Students will gain an appreciation of work.

A Phase II checklist of anticipated student achievements showed comparable responses to those expressed by teachers in the first interview:

1. Students will be familiar with a wide variety of job opportunities, 83.9 percent.
2. Students will have a greater awareness of themselves and their role in society, 75.3 percent.
3. Students will possess a broader knowledge of the importance of making a wise career choice, 73.1 percent.

Overall, the observation of career education activities in other schools did not materialize as planned. Teachers said they were not aware of this option, but would like to have it implemented.

The opening of the career centers provided all school personnel an opportunity to examine occupational information of all kinds. Students made unscheduled visits before and after school, during the lunch breaks, and during the free periods. Teachers scheduled visits for entire classes to view films, explore a variety of material, and receive instruction from counselors about career opportunities.

Teachers anticipated student achievements as a result of their experiences in career education to be an increased knowledge of career opportunities and an increased awareness of themselves and their role in a work oriented society.

Techniques and Procedures

Teachers were asked to check available facilities they used in connection with career education activities. The display (Phase I) appears in Table 1, Appendix B. Over 50 percent were using community resource personnel in their classes and almost half were visiting the career centers. This figure increased noticeably during the year as the centers became more fully operational and counselors had the time and opportunity to schedule visits.

Using different techniques and procedures in teaching career education was evenly divided between yes and no responses in Phase I (37.8 percent). Listed activities were role playing by students, talking about careers if it fits in with subject, using specific audio-visual material, concentrating on differences in careers, and inviting building workers to speak to classes.

Categorized responses from teachers in Phase I were included in the Phase II checklist of applicable procedures used in teaching career education concepts only.

1. Making career education a part of every subject taught, 52.7 percent.
2. Using community resource people as speakers in all grade levels, 49.5 percent.
3. Using activities suggested in the curriculum guides, 44.1 percent.
4. More practical discussions of attitudes and opportunities for achieving success in adult life, 37.6 percent.

When asked if teachers of traditional academic subjects were including occupational information in their class presentations, 18.5 percent did not respond, 25 percent said no, and 56 percent said yes in the Phase I interview.

A slightly rephrased statement in Phase II asked if there was a noticeable increase in the number of academic teachers including this information: 16.1 percent did not respond, 17.7 percent said no, and 82.3 percent said yes.

The teachers were asked if they thought occupational information should be included in every subject offered. Phase I responses: 5 percent, no response; 63 percent, yes; 30 percent, no. Phase II responses: 6 percent, no response; 22 percent, yes; 22 percent, no.

In general, Fort Worth teachers were using community resource people, activities suggested in the curriculum guides, and practical discussions about career opportunities to teach the concepts of career education. An increase was apparent in the number of teachers including occupational information in their presentations. The career centers were supplying the most available information and teachers in the elementary schools were requesting centers in their schools.

Single Change

When asked, "What single change would you make for career education in your school?" 72 percent either felt no change was needed or did not reply in the first interview. Of those replying, 6.7 percent said student services should be expanded; 3.4 percent said more teachers should be involved; 2.5 percent said teachers need better preparation; 1.7 percent wanted more materials and resource centers; 12.6 percent indicated other changes were needed. Some of the other changes were: include it in every subject, distribute a kindergarten curriculum guide, visit other schools, and involve more people in the community.

In the Phase II interviews, 36.7 percent either did not reply or stated no change was needed; 44.4 percent said student services should be expanded; 6.3 percent thought more teachers should be involved; 29.6 percent said more counseling and guidance services were needed; 4.7 percent wanted more materials and resource centers; 1.6 percent said the program should be dropped; and 3.1 percent said other changes were needed (see suggestions in Phase I category).

Another change suggested by teachers was that they be allowed to participate in career education activities on a voluntary basis only. More than half of the teachers agreed with this statement.

In summary, the percentage of teachers not replying to the single change question had decreased by almost half between the first and second interviews, but the number was still significantly high. Either the teachers did not wish to have an answer recorded or they did not feel the question was meaningful. There was an increase in those who thought more teachers should be involved and a very large increase in those who wanted student services expanded. This response may have been a result of an increase in the number of teachers replying.

Summary

The objectives for career education, according to the teachers interviewed, would help students increase their awareness of the variety of careers available and would help the students develop positive attitudes about the world of work. The teachers stated the objectives were realistic and could be achieved.

The majority agreed that career education offered every individual an opportunity to achieve job satisfaction. They further stated this educational emphasis would be of interest to students and probably would help reduce the number of dropouts.

About one-fourth of the teachers had not attended inservice meetings for career education. The meetings were conducted by several different people, but about half of the teachers reported counselors and coordinators conducted the sessions they attended. The inservice sessions were the principal means selected to train teachers in the use of material and to help them understand the concepts of career education. The primary purpose was to gain a commitment to implement career education in every class of the eight selected pilot sites.

In the beginning months of the implementation phase, a committee of teachers was revising curriculum guides for use in the elementary schools. According to the career awareness coordinator, the development of curriculum materials was discontinued because the district administrators of the project determined this activity was not required during this project period. The teachers who had received curriculum materials thought they were interesting, served the needs of individual students, and offered students relevant occupational information. In selecting career oriented curriculum materials, teachers stated the material should be relevant and adaptable to the needs of every student.

At the time of the first interview, only 10 percent of the teachers thought evaluation was being conducted by the Fort Worth School District personnel. The second interview presented the teachers an opportunity to select criteria relevant to evaluation of career education. The respondents indicated observation results by teachers, instruments to measure student attitudes, and a follow-up program would provide the information required.

The proposal suggestion that students be allowed to observe implementation activities in other schools did not materialize.

The career centers which were established in the two middle schools and the two high schools were reporting significant increases in student attendance, teacher awareness, and use of all media and materials. The counselors and their aides were providing a practical service to all involved school personnel.

The student outcomes anticipated by teachers were primarily concerned with the development of acceptable self-images and attitudes, and the acquisition of necessary occupational information.

The response data indicate a significant increase had occurred in the number of teachers actually including career information in their presentations. In general, the teachers were using community resource people, and the materials supplied by the career centers to interest and motivate students in acquiring career information.

The large percentage of teachers recorded as not responding to the question of a single change they would make in career education in their schools apparently indicates a lack of knowledge about the activities which had been undertaken.

The elementary teachers appeared to have more knowledge and understanding of the career education concepts and objectives than did the upper level teachers. The latter group appeared to be equating career education and vocational education.

The teachers expressed increasing appreciation of the services provided by the counselors.

COUNSELORS

A staff of five counselors was selected to coordinate implementation activities in the eight project sites, one to each of the middle and high schools, and one for the four elementary schools. In addition to their liaison efforts between the project coordinator and the involved school personnel, the counselors equipped and maintained career centers in the two high schools and two middle schools, conducted on-site inservice sessions for teachers, and developed files of available community resources.

The interview responses for Phase I reflect the attitudes and opinions of this group (five counselors). The Phase II data contain responses from high school counselors as well (eight counselors). Answers to all questions asked of counselors appear in Tables 3 and 4, Appendix B.

Inservice

Three counselors had not attended inservice sessions for career education at the time of the first interview. However, one had participated in five sessions and another counselor had attended more than eight meetings. Phase II respondents stated four counselors had not attended any inservice meetings since the first interview and two had attended one meeting. The other two had each attended three and four meetings.

As inservice sessions offer an established system for imparting information and explaining new systems or concepts in education, it would appear the selected staff had overlooked a learning experience or did not refer to their own training sessions as inservice.

Student Service

In both interviews, the counselors stated they maintained files of current occupational information and local employment opportunities. Although 40 percent did not have files of community educational information at the time of the first interview, 100 percent said they did file this information at the Phase II interview time.

Of the Phase I respondents, 50 percent stated they had individual interviews with their assigned students every year. However, all had group meetings of various kinds with students on a relatively constant basis. This procedure was in effect before the implementation of career education. Eighty percent in Phase I and 50 percent in Phase II said there were no procedures for employment of students 14 years old or younger. The need for part-time jobs increases as students enter middle school, but insurance and age limits for state work permits limit those jobs available to this age group. Therefore, an attempt was made to determine if this problem was being considered by the Fort Worth counselors. In response to this question, 30 percent said counselors had job opportunity files, 20 percent said referrals were made to the placement office, 20 percent said teachers found jobs for students, and 20 percent said the Mayor's Youth Council helped these students.

Generally, even though the elementary counselor does not have extensive files of educational opportunities, the majority of the Fort Worth counselors maintain files of educational and occupational information for student counseling purposes. Only half of the counselors have individual interviews with each assigned student every year. However, all the counselors met students in groups several times each school year. Students looking for part-time jobs were referred to placement officers, counselors, teachers, and the Mayor's Youth Council.

Testing

Four respondents in Phase I listed standardized tests such as ITED, Kuder Preference, GATB, and ACT as being used in a sequential program of guidance testing. There is no formalized program at the elementary level. The Phase II responses show five counselors reported using standardized tests, and three did not reply.

Generally, the counselors felt the standardized testing program was comprehensive and adequate for counseling students in educational choices. Several of those interviewed thought other tests would need to be developed in the next year or two to measure student reaction and progress as a result of the emphasis on career education.

Evaluation

The respondents were in complete agreement that students are making wiser career choices. Requests for career information had increased considerably, and potential dropouts were experiencing success in career orientation classes. The counseling and guidance staff in each school reviewed and revised its program annually, and all had knowledge of a well defined plan for coordinating career education K-12.

The following responses were recorded in answer to the question of what criteria counselors considered relevant to an ongoing evaluation of career education in their schools in Phase I:

1. How many students are requesting career information.
2. Do students continue exploration and experimentation in high school.
3. What tests are there to measure attitudes of students and teachers.
4. How many students are using the career center. How many repeat visits are there.

Phase II interviews asked counselors to select the means they felt should be used for evaluating career education. The items most frequently checked were:

1. Observation results by teachers, 75 percent.
2. Establish a follow-up program, 75 percent.
3. Students, parents, teachers given an opportunity to express their views of career education, 75 percent.
4. Compare student interest with those not involved in career education, 50 percent.

In summary, the Fort Worth counselors were recording attendance and material use data at the career centers which they maintained and were in agreement that students were making more requests for career oriented material. The special investigative classes at the middle school level collected data to support the statement that potential dropouts were experiencing success in these classes. Counselors suggested quantitative data on student involvement in career education activities, teacher observation reports, and follow-up reports be used for evaluative purposes.

Occupational Information

Although three (60 percent) of the Phase I interviewees had been doing more occupational counseling, the number had dropped to 50 percent (four of eight) several months later. It may be the students were receiving that information in the career centers. During the school year more academic teachers were adding occupational information to their daily presentations. Observations were made by counselors and students concerning this information.

When asked how future occupational requirements were projected for their area, the following responses (Phase I) were received:

1. More technical skills will be needed.
2. New regional airport will boost jobs in building and trade.
3. Most industries expected to grow.
4. Employment opportunities in every area are expected to be good.
5. No studies and no projection.

The question was rephrased in Phase II interview forms and listed possible sources of information about jobs which may be available 5-10 years from now. The counselors choices were:

1. Current trade journals, 25 percent.
2. Employment Commission, 25 percent.

3. School placement officers, 25 percent.
4. Local Chamber of Commerce, 12.5 percent.
5. U. S. Census, 12.5 percent.
6. U. S. Department of Labor, 100 percent.
7. Community business leaders, 12.5 percent.
8. Other, 12.5 percent (counselor).

Overall, counselors reported that student requests for occupational counseling had increased since the inception of career education and academic teachers were including occupational information in their presentations. The first interview form contained a question asking counselors how they predicted which job types would be needed in future years in their area. The responses were primarily referring to the employment demands created by construction of a new regional airport. A rephrased statement asking for information sources was included in the Phase II interview forms. The counselors listed the U. S. Department of Labor, the Employment Commission, current trade journals, and school placement officers as the most likely sources they would select.

Single Change

The counselors assigned to the participating schools maintained contact with teachers involved in career education on a weekly, and sometimes a daily basis. Varied types of media were used to create and maintain interest and teachers were regularly informed as to the material and information which was available to them and their students.

Each interview form asked the counselors to select a single change which they would like to make in career education in their schools. The Phase I responses were:

1. No change at this time, 40 percent.
2. Expand services to students, 20 percent.
3. Offer more guidance and counseling services, 20 percent.
4. More materials and resource centers, 20 percent.

Phase II responses to the same question:

1. Expand services to students, 37.5 percent.
2. Involve more teachers, 37.5 percent.
3. Better selection of students, 12.5 percent.
4. More materials and resource centers, 25 percent.
5. Other, 25 percent (orientation classes for eighth grade rather than sixth; convince vocational teachers program is needed).

In summary, the counselors were in continuous contact with teachers and supplied them with information concerning current occupational materials. The changes recorded from one interview time to another indicate that the counselors thought more teachers should be involved in career education and more services should be made available to students. There was a continuing need for more materials and resource centers, and one counselor stated the eighth grade students would probably benefit more from the orientation classes in the middle schools than had the sixth grade students presently enrolled in these classes.

Summary

Almost half of the counselors interviewed were not attending inservice sessions for career education. It may be that they were not recording their attendance at meetings with the project coordinator as inservice training. However, the counselors themselves were conducting some of the inservice sessions for teachers, so there appears to be some discrepancy in the responses for both interviews.

The counselors reported they maintained current files of educational and occupational opportunities for student counseling and guidance purposes. All of those interviewed had group meetings with students during the school year, and half of the counselors also held individual counseling sessions with students. A system-wide procedure for helping students 14 years of age and under secure part-time employment had not been established although the majority of the counselors stated there was a need for this service.

The standardized testing program using Kuder Preference, ITED, and GATB tests was offered to students in the middle schools and high schools, but there was no formalized testing program for elementary students. The respondents suggested there would be an increasing need for instruments which could measure the progress of students involved in career education.

The Fort Worth counselors were responsible for equipping and maintaining the career centers which were established in the two middle schools and the two high schools. The elementary counselor supplied teachers in the four elementary schools with information and materials. Each of these counselors was collecting and recording data concerning the numbers of students using audio visual equipment and material, the number of requests for occupational information, the number of students visiting the career centers, and the number of teachers releasing classes to the career centers for film viewing and instructional purposes.

The counselors stated they were doing more occupational counseling and an increasing number of academic teachers were including career information in their presentations. In predicting future occupational requirements for their area, counselors indicated the demand for skilled laborers would increase because of the construction of the regional airport. They also suggested data could be obtained from current trade journals, the publications of the U. S. Department of Labor, and school placement offices.

In response to the question regarding a single change they felt should be made in career education in their schools, the majority saw a need for expanded services to students and the involvement of more teachers in the implementation activities.

Fort Worth counselors were the liaison between the administrators of the career education project and the school personnel. They had multiple responsibilities which they handled in a professional manner. However, they were overburdened with requests of a clerical nature which might be assigned to persons other than counselors. The counselors felt they could be more effective if one career counselor was assigned to each project site.

ADMINISTRATORS

Data from ten administrators were recorded in Phase I and from eight administrators in Phase II. Attempts were made to interview the same people in each interview, but two forms were not returned in Phase II. Answers from all administrator interviews appear in Tables 5 and 6, Appendix B.

Objectives

Administrators listed some of the following objectives for career education in their schools in Phase I:

1. To help students develop positive attitudes toward the world of work.
2. To present information about the variety of career options available.
3. To inform parents and the business community about career education.
4. To assist students to make realistic career choices.

The checklist of items which best describe career education in the interviewee's school appeared in the Phase II form. The objectives most frequently selected were:

1. A concept of self which is in keeping with a work oriented society, 90 percent.
2. Positive attitudes about work, school, and society, 100 percent.
3. Personal characteristics of self-respect, self-reliance, perseverance, initiative, and resourcefulness, 100 percent.
4. A realistic understanding of the relationship between the world of work and themselves, 100 percent.

All of the respondents stated the objectives were realistic and could be achieved.

In suggesting the direction career education should follow in the future, the administrators in Phase I interviews listed involvement of more students, teachers, and parents; build more services into the K-8 program; and be aware of the supportive relationship sustained with one another. Responses to the same question in Phase II forms show few changes. The majority selected the following suggestions: correlate career education with all subject matter; have carefully planned inservice sessions for all school personnel, and involve all schools in the system.

Overall, the administrators listed items concerning development of acceptable student attitudes, awareness of the wide variety of occupations available, and a realistic understanding of the world of work as being indicative of the career education objectives in their schools. According to the Fort Worth administrators, career education should be directed toward an involvement of all schools and all students in the future. They stated the concepts should be correlated with all subject matter and teachers should receive extensive inservice training in this area.

Evaluation

The administrators in the initial interview stated in-house evaluation was primarily concerned with observation of implementation activities and their effect on student attitudes. Weekly meetings and discussions with teachers were sources of information, as were feedback reports on inservice sessions. The data show no evidence of a coordinated system-wide evaluation although principals generally thought such a plan should be implemented.

Of the administrators in the Phase II interviews, 90 percent stated the local school system was evaluating career education in their schools. Superintendents, supervisors, consultants, and principals were listed as conducting this evaluation effort.

When asked what criteria they felt should be used for evaluating career education, the Phase I administrators said new instruments should be developed to measure student attitudes; teachers, parents, and students should express their opinions on career education; inservice activities should be evaluated; and teacher planned tests should be used. The majority of responses by Phase II interviewees selected criteria such as instruments to measure student attitudes; observation results by teachers; comparison of students involved in career education with those who were not involved; and students, parents, and teachers expressing their views of career education.

The strengths of career education listed in Phase I forms were generally concerned with increased student awareness to the world of work, an opportunity to make more relevant school and career choices, and a means of assisting teachers to make their presentations more relevant. These observations were incorporated into a checklist in the Phase II forms. Administrators listed strengths such as increased student awareness to the world of work, services provided by career counselors and consultants, and development of positive student self-images.

There was general agreement in Phase I that one of the weaknesses of career education was the lack of trained personnel available to each school on a regular basis to assist in implementation. Principals also stated more schools and students should be involved by expanding to all subject matter areas. Phase II administrators cited these weaknesses: confusion as to objectives of career education; lack of trained personnel in schools on a regular basis; and too little time to properly train teachers in the use of career related materials.

In summary, the Fort Worth project was in its first year of implementation and the data indicate a coordinated procedure for evaluation had not been formulated. The administrators stated such a procedure should relate to measurement of student attitudes, the value of instruction teachers received through attendance at inservice training sessions, and opinions expressed by students, parents, and teachers. One administrator felt there was no need for external evaluation because administrators should already be familiar with proper evaluation techniques. Two of the elementary respondents stated these activities were not applicable at that level.

The majority of those interviewed stated the strengths of career education were an increased student awareness to the world of work; the subsequent development of a positive self-image; and the positive contribution of counselors and consultants in providing services to teachers.

The weaknesses apparent to the administrators concerned lack of training time for teachers, confusion as to the objectives of career education, and the need for more trained personnel to be available in each school.

Teacher Related Information

Of the Phase I respondents, 50 percent stated teachers attended at least one inservice session for career education, and 70 percent provided released time for teachers to develop career-oriented curriculum materials. The administrators in Phase II stated teachers attended from one to three days of inservice in career education, and 62.5 percent had provided teachers released time to develop career education curriculum materials. The administrators were in agreement that teachers should receive extra pay for developing curriculum materials.

Generally, the committees of teachers developing career oriented curriculum materials worked primarily during the second semester and summer of 1972. They were provided released time from classes and received extra pay. However, after the decision of the project directors to discontinue production of curriculum guides, these committees became inactive.

Single Change

The categorized responses to the single change each administrator would make in career education in his school appear in Tables 5 and 6, Appendix B. Since only three administrators answered the questions in Phase II, those data are not significant for comparison purposes.

Of the administrators, 40 percent would not have made any change at the time of the first interview. Another 40 percent indicated services should be expanded to students, such as another lab resource room and more time being spent with local businessmen. This percentage also included those who wanted all students involved.

The administrators in the Phase II interview stated more teachers should be involved, 25 percent; services to students should be expanded, 25 percent; there should be a better selection of students, 25 percent; more materials and resource centers were needed, 25 percent; no change needed, 37.5 percent; and 12.5 percent said other departments should be notified of observed student weaknesses; i.e., math.

Overall, administrators in both interviews agreed that services to students should be expanded and more teachers should be involved. There was an increase in the percentage of those recording more materials and resource centers were needed and a slight decrease in those stating no changes were required at the present time.

General Information

All the administrators agreed that study tours were an integral part of career education and the number of trips ranged from none (10 percent) to eight or more (20 percent) in both Phase I and Phase II.

Although 70 percent in Phase I and 100 percent in Phase II said advisory committees were participating in career education planning activities, further probing elicited various understandings of the advisory committee. To a majority, this expression referred to teachers' groups writing material and planning activities.

Administrators were asked what criteria were used to measure K-12 continuity for career education in Phase I. Responses were:

1. Should develop gradually.
2. Put student progress first.
3. In process of development--too slow.
4. Director and leaders meet.
5. Based on concept seeking and value seeking.
6. Program is new so have had teacher planning and discussion periods.

A simplified form of the question in Phase II forms asked if there was a well defined plan for coordinating career education K-12. Seven of the eight (87.5 percent) responded affirmatively.

In summary, the Fort Worth administrators stated the field trips scheduled for students were a major activity, and they would like to have funds allocated in the coming school year to increase the number of trips taken. Advisory committees had been cooperating with personnel involved in vocational education for a number of years. Some of these committees were also assisting the career education planners until such time as special committee appointments could be made. In other instances, teachers, counselors, and principals were serving as advisory committee members for career education planning.

The coordinated effort for K-12 implementation of career education was a well defined plan, according to the administrators interviewed in Phase II. There had been no consensus reached in the first interviews as to the most effective components which should be incorporated in such a plan.

Summary

The administrators' objectives for career education most frequently concerned assistance in helping students develop desirable attitudes toward school, work, and society as well as providing students with information about the wide variety of available career options.

Fort Worth administrators were well informed as to the implementation of career education in their district. They indicated a desire to have more time to evaluate the progress in the first year, but were not certain of the means or method which would best achieve that objective. They all revealed concern as to the relevancy of the program but were committed to the concept so far as they understood its relation to their total program.

Student measurement devices were most often mentioned as criteria for evaluation but all felt that effort should be delayed another year or two. There was no agreement on the type of instrument to be utilized.

The administrators thought the strengths of their programs were achievement of the objectives for student progress and the assistance rendered by the career counselors. The recognized weaknesses were mentioned as more time needed for teacher training, more clearly perceived objectives for total system implementation, and the need for more career-oriented personnel in each school on a daily basis to coordinate implementation activities.

Released time was provided for teachers to develop curriculum materials in some schools. This was not a project-wide practice, but about two-thirds of the schools had teachers involved.

According to those interviewed, teachers were attending inservice meetings throughout the project period, with the majority stating the teachers attended at least one meeting the second semester.

Almost half of the administrators did not indicate any change was needed in career education in their schools. However, the majority of those desiring change thought there should be an expansion of services offered to students, and also felt more teachers should be involved.

Field trips were a high priority item for future funding allocations. All the administrators felt they were an integral part of the implementation activities.

The Fort Worth administrators stated they had knowledge of a well defined plan for coordinating career education K-12 in their district. At the close of the 1972-73 school year, the superintendent was proposing that this educational endeavor be implemented in approximately eight more elementary, four more middle and four more high schools in the Fort Worth Independent School District. Therefore, those already involved would be aware of the effects of the implementation procedures and the planned structure for increased implementation.

PLACEMENT COMPONENT

The placement component was an extension of the guidance and counseling component. The placement service worked in cooperation with the guidance counselors, cooperative education teacher-coordinators, vocational teachers, Chamber of Commerce, Texas Employment Commission, and other civic and private agencies.

A survey was conducted to determine potential employers for students wishing to work part-time, those leaving school before graduation, and high school graduates.

The career centers, counselors, and placement personnel provided students information concerning occupational and educational opportunities. Visits were regularly made by the placement director to classrooms to furnish teachers and students with current occupational information. Applications for employment by students are kept on file in the placement office, and, as job slots become available, the teachers are advised of the openings and they contact the students.

A well organized follow-up plan provided information on exiting students four months after they leave school, as well as a long-range follow-up covering a five year period after the students leave school. Those who leave school without graduating are followed up on a short range basis to see how well they are performing on the job and also to see if further counseling is needed.

The placement advisory committees, Texas Employment Commission, and area publications are consulted for information concerning future employment opportunities in the Fort Worth region.

According to the placement director, there has been an increase in the number of referrals for student placement from teachers in the career education program. The director also stated that students were more aware of the many careers available to them in the world of work and many of them were also more aware of the services offered by the placement office.

In suggesting a single change which could be made in career education, the respondent stated the career education implementation should be expanded to every school in the district and involve more of the community.

In summary, the objectives formulated for the placement component of the Fort Worth proposal are being activated and achieved. The follow-up of both exiting and graduating students is well organized, and the files of both students and job opportunities are current. The business and community leaders are serving on advisory committees, and civic and employment agencies are cooperating with the placement director in matching student job requests with available job opportunities.

The methods for providing students with the necessary information for job placement involve teachers and counselors and have been successful. The desire of the placement director to see the program expanded to all the schools in the system will apparently be realized in the 1973-74 school year.

OVERALL REVIEW OF INTERVIEW DATA

HOUSTON INDEPENDENT SCHOOL DISTRICT

The major focus of the Houston Independent School District proposal was to complete development of the Occupational Awareness Program materials and to determine the effectiveness of such a programmatic effort through a comprehensive research design. Instruction was carried on in conjunction with the social studies curriculum. Special coordinators were each assigned several schools to provide assistance, support, and demonstration services to the elementary teacher in the use of career development materials. Materials consisting of lesson plans, resource material, methodology, and instructional media were printed and used.

Test developments for the research phase were to focus primarily on the affective changes in children exposed to the program. These instruments were developed to measure an expanded self concept or an awareness of self in the world of work. Such instruments would tap areas such as valuing work, pride in work, and peer respect and work. Two levels of this instrument were developed--primary and intermediate. Testing of selected groups of students began in September, 1972, and was completed in April, 1973.

The career education efforts at the middle school level included the provision of elective occupational orientation courses in the seventh grade. By June of 1973, a package of tested curriculum material was available for use in expanding the program to all middle schools.

The University of Houston evaluation procedures included on-site interviews with teachers, counselors, and administrators in the selected schools, observation of consultant and monitor activities, and discussions with the Research Services Department staff on testing techniques and results.

A comprehensive analysis of the data recorded from two interviews with each of the three selected groups, plus examination of the developed curriculum guides for all levels, reveals the degree to which the implementation activities were directed and the penetration achieved at all levels with school personnel involved in the career education emphasis.

Of the three groups interviewed, the administrators were most articulate about the career education objectives for their schools which they felt were realistic and could be achieved. The teachers of the social studies classes who were receiving the developed curriculum material understood the concepts and objectives which had been formulated for their grade levels to a greater extent than those whose involvement was less penetrating in the first semester. However, by the end of the school year, there was increasing awareness by the majority of the elementary teachers interviewed. The occupational orientation teachers at the middle school level set realistic interim and long-term objectives which were being achieved. The counselors at the middle schools and the elementary schools were less perceptive to the concepts and activities which were being implemented in career education.

The inservice sessions for career education which were designed to acquaint all school personnel with the objectives, concepts, materials, and developmental activities of the program were attended by one fifth of the counselors and one half of the teachers. Less than half of the principals stated teachers had been provided inservice training. The relatively low attendance figure could reflect the initial emphasis toward implementation in conjunction with the social studies curriculum. It is also possible teachers were not relating earlier experiences with inservice which may have occurred prior to the evaluation period. If either of these considerations is valid, data recorded from other implementation activities should reflect that fact. Although over three fourths of the teachers reported no released time had been provided for development of career oriented curriculum material, almost the same percentage of administrators stated the released time had been provided. Teachers who had developed or revised curriculum materials in cooperation with awareness consultants had worked primarily on their planning periods or on personal time. Some teacher committees had reviewed curriculum materials in the early months of the project, prior to the evaluation period. Administrators may have been referring to these sessions as being released time for teachers to assist in the revision and development of curriculum materials.

The evaluation procedures instituted by the Research Services Division included pre- and post-testing of selected groups of elementary students, and the presence of monitors in the classrooms observing teacher and student activities related to career education. A reporting system for principals implementing career education activities provided another means of ongoing in-house evaluation.

Despite the fact that these procedures were established and operative, the majority of the teachers and counselors interviewed did not relate these activities to the questions concerning evaluation efforts in their schools. The interviewed teachers were concerned about the most effective means for evaluating the progress of their students. The materials in the curriculum guides suggested some means, and the consultants furnished others. In addition, the teachers devised tests suitable to the subject and age level of their students. However, the teachers were not involved to any extent in reporting specific progress in career education presentations or activities. Counselors and administrators also were suggesting that more accurate measures of student progress should be developed for the career education emphasis. The use of the form by which principals were evaluated on implementation in their schools gave impetus to the importance of these activities.

All of the groups reported students were evincing an increasing interest and awareness to the career information which they were receiving in multiple form. The consultants from the Occupational Awareness staff were working with teachers and students in providing curriculum material with occupational content, establishing, equipping, and maintaining mini career centers, conducting informal and scheduled inservice sessions, and acting as liaison between the schools and the community in providing resource speakers and arranging field trips related to career education activities. Their efficiency in carrying out their responsibilities contributed significantly to the successful implementation of career awareness.

The consultants helped arouse interest in career education and the teachers translated what they learned into practical measures for students to better understand the concepts of career education. Classroom projects, parents as role models, community speakers, and more relevant multi-media materials captured the students' imaginations and encouraged teachers to present more occupational information as the year progressed.

The comprehensive collection of curriculum material published in the Career Orientation Handbook for teachers of occupational orientation classes at the middle school level was ably accomplished by the coordinator assigned to this component.

In each of the groups interviewed, responses were recorded concerning the single change each would make in career education in his school. The teachers and administrators were in agreement that more materials should be made available and administrators saw a need for more training sessions for teachers. An overall statement of the need for an expansion of student services was expressed by the counselors.

The activation of the Advisory Committees and the compilation of lists of available community resources and personnel was increasingly apparent by the end of the project period. The involvement of persons outside the school forces added to the interest and implementation in career education.

Plans for expanding the career education emphasis to 172 schools in the Houston Independent School District were being formulated at the end of the funded project period. The administrators charged with the responsibility for implementing activities were concerned about the lack of an effective communication system between all levels of school personnel, as well as a lack of understanding of the structure for coordinating all elements and components of the total program.

HARLANDALE INDEPENDENT SCHOOL DISTRICT (SAN ANTONIO)

Of the three funded school districts, Harlandale was the most advanced in preparation of curriculum materials at all grade levels. The objectives established for the elementary component concerned development of sequential guides of career development materials at all grade levels, training sessions for teachers, and a program for continuous revision and evaluation of materials and methods. The middle school component formulated objectives regarding corrective feedback based upon evaluation of achievements, definition of guidance criteria to measure student behavior, and inservice training for all school personnel.

The placement component would provide assistance to all exiting students and establish a follow-up program for data retrieval on all students from grades eight to twelve. The community involvement component would primarily be concerned with the dissemination of career development information outside the schools to the community leaders to gain their assistance and cooperation in making adjustments to the program.

Trained counselors were the resource personnel selected to distribute curriculum guides, audio-visual material, and any other material applicable to career education. Special orientation classes were developed at the sixth and seventh grade levels to provide a focal point for the investigation phase of the project. The counselors had the added responsibility of developing, organizing, and implementing a program of guidance appropriate for the maturity level of the students.

Pre- and post-inventory instruments were devised to measure the effectiveness of the various treatments in terms of student outcomes. The research analysts and curriculum supervisors analyzed the results and recommendations for revision and refinement of the program for the following year were made.

The University of Houston evaluation procedures included initial visits to the 22 schools in the Harlandale Independent School District, and two subsequent visits to the six selected project sites for the purpose of interviewing all school personnel involved in implementation activities and observing the techniques employed by teachers in presenting career education concepts.

The Harlandale teachers and administrators who participated in the interviewing sessions were in agreement as to the career education objectives proposed for their schools for the school year, 1972-73. The objectives referred to helping students develop positive attitudes toward themselves and the world of work and presenting students with information concerning the wide variety of occupational choices available to them. The counselors exhibited a thorough knowledge of career education and concepts relating to middle school investigative activities. The elementary counselors were less articulate when discussing objectives.

In both the elementary and middle school components, the objectives included a series of inservice sessions be held to train teachers to recognize and utilize career education concepts, and to instruct all school personnel in the proper and most effective use of the curriculum materials being produced by the staff of specialists at the career education center. Only one counselor had not attended these inservice meetings, but a significantly high percentage (69 percent) of the teachers had not been present at any scheduled inservice session for career education. The majority of the administrators were not aware of released time being provided teachers for attendance at inservice sessions. The data recorded from the teachers' responses show the lack of understanding concerning concepts, material content, techniques and procedures for class presentations and evaluation techniques.

The middle school counselors and the elementary school resource teachers were the main resource persons in each school from whom teachers could receive assistance. Their dedication to the philosophy of the developmental program and their daily contact with project site teachers were unifying forces which contributed significantly to any successes the program may have achieved. It is possible that teachers did not attend scheduled inservice sessions because of the amount and degree of assistance they received from the two groups mentioned. However, there was apparent confusion as to who was to attend, according to several teachers who responded to interview statements about these inservice meetings.

The necessary procedures for reporting student progress and behavior modification as a result of experiences in career education were not clearly understood or utilized by the majority of the teachers interviewed. Administrators indicated by their responses a lack of knowledge concerning an established systemwide evaluation of career implementation activities. Counselors were recording quantitative data of student requests for occupational counseling and information dealing with career opportunities. According to the counselors, the pre- and post-inventory testing of students apparently needed revision in content and application.

Apparently the communication between the various components and the personnel in each could have been simplified. Teachers, counselors, administrators, and project directors expressed varying sentiments as to the need for evaluation, the most effective method to be selected, and the components which should be evaluated.

The primary focus of the Harlandale project related to the development of sequential curriculum guides containing occupational information for all grade levels. A trained and carefully selected staff of specialists was developing these materials for dissemination to teachers. Although the project was in its second year of this phase, teachers had not received curriculum guides, indicating that the printing and distribution process was not adequate. This administrative problem had not been completely resolved by the close of the school year. At the second interview a number of teachers reported they had received the curriculum material developed by the research staff. In many instances, these teachers stated they were not using the guides because they arrived too late to be integrated into their planned presentations. Others said they were not familiar with the content or the proper techniques for introducing occupational information into subject matter presentations and therefore would wait until the following year to use the material. The counselors in the middle schools were making intensive efforts to provide teachers with relevant information, and also were trying to help the teachers understand how to most effectively present the information they were receiving.

Interview responses from all three groups indicate an observed increase in student awareness of the variety of career options and a developing interest in making more appropriate occupational choices. The career counselors were collecting and maintaining current files of educational and occupational opportunities, and the students were scheduling and increasing the number of visits to examine these materials.

The majority of those interviewed in each group expressed satisfaction with the field trips which had been scheduled during the project period. One of the most successful tours was to a military establishment which provided base transportation for the students as well as organized tours of various facilities. The field trips permitted an opportunity for students to observe several possible career choices. Teachers, counselors, and administrators expressed a desire that additional funds be allocated for this activity in the next school year.

Teachers, counselors and administrators indicated the most needed change for career education in their schools would be an effective, comprehensive training program for teachers. Throughout the analysis of the data recorded from the Harlandale interviews, it was apparent that the teachers either had not taken advantage of scheduled inservice meetings for career education, or were not aware the meetings were being held. For each of the examined categories, the data consistently indicate the lack of teacher awareness. Whatever the system that had been organized for this important activity, its combined effectiveness was less than should have been anticipated.

A major problem confronting all the school personnel involved in implementation of career education in the Harlandale Independent School District concerned the plans for continued funding. It appeared that the community involvement and placement coordinators who established data retrieval services for students, and effected an information dispersal system for community, business and industrial leaders with the career education development in the schools, would continue their involvement duties and responsibilities. However, the administrators and career counselors were uncertain as to the degree of emphasis on career education which would be maintained in their schools for the 1973-74 school year. The proposed curriculum guides for every grade level were in the final stages of development at the termination of the 1972-73 school year, but not all of the prepared material had been printed and distributed to teachers.

FORT WORTH INDEPENDENT SCHOOL DISTRICT

The major emphasis for the Fort Worth Independent School District proposal was divided into two phases, planning and implementation. The focus for the first year was to initiate an attitude of acceptance and importance for career education in the total program on the part of teachers, counselors, administrators, parents, the business community, and students.

A staff of specially trained career counselors was selected to provide liaison between the various components of the proposal and those who were responsible for implementation in the project sites. The high school and middle school counselors equipped and maintained career centers for student and faculty use. The elementary counselor worked in conjunction with teachers, librarians, and principals to establish career corners in libraries and classrooms. Besides furnishing all types of media materials and career information, the counselors compiled lists of community resource personnel for teachers and scheduled visits for students to business and industrial sites in the area.

Tentative curriculum guides for social studies in the elementary schools were distributed to teachers. Special classes in occupational investigation were scheduled for sixth grade students. Career education concepts were to be infused into all subject matter areas in the high school classes. A placement service was an ongoing activity and provided current information about exiting and graduating students and employment possibilities for each.

The University of Houston evaluation procedures included visits to each of the project sites and interviews with teachers, counselors and administrators involved in implementation activities.

A comprehensive analysis of the data recorded from the two interviews conducted with each of the three groups exhibits the degree to which the proposed commitment to the concepts of career education was achieved.

The administrators, teachers, and counselors were in agreement as to the objectives which could be achieved in their schools in this first year of implementation. These objectives were to help students increase their awareness of the variety of careers available and to help the students develop positive attitudes toward the world of work, school, and society.

The Fort Worth objectives which were set for each component were realistic within the limits proposed for the implementation activities of the first year. Student and community needs had been surveyed and the established vocational education program provided a well organized base into which the concepts of career education could be realistically infused.

More than three fourths of the teachers were attending inservice sessions for career education and about the same number had been involved in the development of career oriented curriculum materials. All of the groups interviewed expressed a desire to have these sessions conducted on a regular basis through the school year. The stated objective for the inservice sessions according to the proposals was to provide the involved school personnel an opportunity to receive specific information concerning what career education purports to be, how it can be implemented, and the most effective means to measure the progress of the individual components. Therefore, the reported attendance figures indicate the interest of the teachers, counselors, and administrators in preparing themselves for more active involvement in the coming school years.

The programmatic activities were still in a tentative stage of development, and those interviewed thought evaluation procedures would include instruments to measure the attitudes of teachers and students after having used the information available on career opportunities. Quantitative data were being recorded on student use of materials and equipment in the career centers, and the placement office had organized an effective followup on exiting and graduating students. Until such time as the experimentation procedures had been completed, and the anticipated attitude changes had resulted in commitments from the school personnel who would be active in implementation, an evaluation system would be tentative. However, such procedures should be thoroughly understood by each of the persons who will be reporting results since well organized feedback methods facilitate necessary revisions on a continuing basis.

The career counselors were providing information on careers and coordinating activities between teachers, students and representatives of the community. The teachers and counselors reported an increasing interest on the part of the students in the information they were receiving about occupational opportunities. Also the number of teachers including this information in their presentations was increasing. Both the counselors and placement service were receiving more student requests for assistance in finding jobs which would permit them to continue their education either after graduation or while they remained in school. The elementary teachers had received tentative curriculum guides to be used in conjunction with the social studies curriculum. The middle school teachers, other than those conducting the special orientation classes, were using material of an occupational content which was collected and maintained in the career centers. Teachers in the high schools were being constantly informed by the counselors of the nature and availability of materials in the career centers which could be used in their presentations. It appears that further efforts to develop curriculum materials at the local level would be minimal.

The accepted proposal for the Fort Worth project contained a statement concerning student observation of career education in schools other than that in which he was enrolled if such subjects were complimentary to his choice of curriculum. At least in the first year, this activity had been delayed. Field trips were taken by elementary students to local businesses and industries and class projects were formulated around these trips. Teachers and counselors expressed the hope that more funds would be allocated for field trips in the succeeding years.

The interview forms for each group interviewed asked what single change the respondent would make in career education in his school. Responses from each group show agreement that services to students should be expanded and more materials and resource centers were needed. Although three fourths of the teachers did not indicate a response in the first interview, that figure decreased to less than half by the time of the second interview. Teacher comments suggested that the program was so new they had not considered what changes might be necessary.

Plans for expansion of career education to a larger number of schools in the Fort Worth school district were being formulated at the time of the last interview. Administrators, teachers and counselors were involved in the planning for this expansion and were providing information to the project directors which would assist them in scheduling activities for a more comprehensive involvement of teachers, students, and the community.

CHAPTER V

EVALUATION OF IMPLEMENTATION PROCEDURES

An evaluation of the effectiveness of the implementation procedures utilized by each of the districts examined requires the consideration of the specific components outlined in the funded proposals. In Houston, emphasis was placed on Occupational Awareness, K-6, and the development of curriculum materials for the middle school occupational orientation classes. The major emphasis of career education in the Harlandale Independent School District was directed to occupational awareness development activities in the K-5 elementary schools and the middle schools, 6-9. In addition, a placement service was initiated for the secondary schools, and a community involvement component was organized to communicate career education information to business and industrial firms in the community. The most comprehensive, so far as involvement of students is concerned, is the Fort Worth Independent School District program which embraces implementation in selected sites, K-12. This program also utilized a placement director to coordinate placement services at two senior high schools.

A general comparison of career education implementation activities in each of the funded proposal sites and the results of those activities may be examined by a review of common areas of concern. These include utilization of staff, degree of penetration achieved in inservice training sessions, reported effectiveness of developed curriculum material, awareness of procedures developed for in-house evaluation in each district, student outcomes as a result of treatments attempted, and the structured continuity between program components.

Utilization of Staff

The Houston Occupational Awareness Program utilized a trained staff of consultants to develop and disseminate prepared curriculum guides. Instruction was carried on in conjunction with the social studies curriculum. These special consultants were each assigned several schools and were to provide assistance, support, and demonstration services to the elementary teachers in the use of career development materials. Materials consisting of lesson plans, resource material, methodology, and instructional media were printed and distributed.

The regularly scheduled visits of the occupational awareness consultants to their several assigned elementary schools provided the opportunity to distribute materials to individual teachers and to give instruction on the proper use of the materials. In addition to these responsibilities, the consultants equipped, maintained, and operated career centers in several area elementary schools for the use of faculty and students.

The Occupational Awareness Coordinator and selected consultants also conducted inservice sessions for all school personnel interested in career education. These intensive staff development sessions examined and explained the objectives and concepts of career education. Suggested implementation activities and possible community resources were explored and compiled for teachers. Techniques and procedures for maximum use of the career oriented curriculum materials were developed in the training sessions, and school personnel were instructed in the implementation and infusion of these methods into their daily presentations.

The Harlandale Independent School District emphasized the development of curriculum guides containing career oriented information for all grade levels, and this was the primary objective for the Career Education Center staff of research coordinators. The members of this staff represented each of the major disciplines; i.e., language arts, mathematics, social science, and natural science. In addition to the research coordinators, a task force of selected teachers was appointed to research, organize, and compile the materials and to prepare guides for each grade.

The staff of research coordinators were to develop evaluation procedures, including survey forms and questionnaires for both teacher and pupil use. It was assumed that these instruments would provide a continuous check on each unit of career development material and each instructional technique as it was introduced.

Carefully selected counselors were assigned to each of the four middle schools, and four to the 18 elementary schools. The role of the counselors was to be supportive to the teacher, providing assistance in planning the integration of guidance in all educational experiences and providing group and individual counseling when needed. Their responsibilities included an evaluation of all existing guidance material to determine its adaptability for career development guidance. Special methods were to be devised to assist the teachers in working effectively in the guidance program. The middle school counselors were to collect and maintain files of occupational material which would be available to students and teachers on a request basis. These duties were in addition to their regularly assigned guidance and counseling activities relating to student curriculum choices within the established academic program.

A qualified placement director was employed to revise and implement the necessary services within the placement component. These services included providing assistance to all exiting students and establishing a follow-up program for data retrieval on all students from grades eight to twelve. The community involvement component was staffed by a director formerly employed in industry. This liaison effort was primarily concerned with the dissemination of career development information outside the schools to community leaders to gain their assistance and cooperation in making adjustments in the programmatic activities.

To implement the career education program changes and redirection of the current curriculum in the Fort Worth Independent School District, the Associate Assistant Superintendent for Vocational-Industrial Education worked with the vocational education staff of three consultants for secondary programs, one consultant for adult programs, one coordinator for cooperative education programs, and the directors and consultants of all other programs, elementary and secondary. A career awareness coordinator was employed to coordinate the existing occupational programs and the pilot efforts at all grade levels, K-12.

A committee of teachers from each grade level, K-5, and human growth and development teachers worked with the coordinator to explore revisions of the elementary school curriculum. Their goal was to incorporate career awareness and self-development experiences into the elementary grades and to redirect the elementary instructional program based on these concepts.

A committee composed of vocational-industrial education teachers and academic teachers was selected by the career awareness coordinator to design a program which incorporated occupational investigation and self-awareness in the instructional program in grades six, seven, and eight. All areas of instruction were to be involved in this project. In addition a required course in occupational investigation for all students in grade six was designed by the committee. Means were to be explored for more effectively using existing laboratories of different vocational industrial education programs for in-depth occupational investigation.

All secondary consultants cooperated with the career awareness coordinator in coordinating the total career education program, grades nine through twelve. The Associate Assistant Superintendent for Vocational-Industrial Education and the staff for this division of the school system worked closely with consultants for the academic disciplines, counselors, administrators, teachers, students, and parents to interpret the career education concept and to redirect attitudes toward career education.

A career resource center was established and staffed with a resource guidance person at each site for use by students, parents, and other staff members. Counselors at all grade levels, K-12, were to conduct a program of guidance and counseling in cooperation with the career awareness coordinator and staff members of the elementary program. A placement service was established at each of the high schools in the project site as an extension of the guidance and counseling component. A placement officer and secretary were employed to staff the placement service.

The Houston Independent School District's utilization of a staff of consultants who had received intensive training in staff development procedures, curriculum revision and development, and techniques for presenting multimedia materials appears to be the most effective of the three treatments attempted when considering maximum utilization of employed staff. The consultants had daily contact with teachers, administrators, and counselors in their assigned project sites. Opportunities for individual consultations and on-site revisions of material usage and suggested activities provided a continuous procedure for adaptability to student needs and resulted in a system of ongoing feedback for evaluation purposes. With the proposed expansion to 172 schools in the district in the forthcoming school year, the Occupational Awareness Coordinator and staff are prepared and available to provide a core of specialists to facilitate this proposed expansion of career education.

Although the Harlandale district also employed a staff of research coordinators, their primary responsibility lay in revising, planning, and developing sequential series of curriculum guides for all grade levels. The counselors assumed the responsibility for disseminating the prepared curriculum guides to the teachers in their schools, collected occupational information for student use, and provided assistance to teachers in scheduling field trips, in addition to their regular duties of advising and counseling students.

The counselors employed by the Fort Worth Independent School District to coordinate implementation of career education in the project sites were well trained and committed to their responsibility. The equipping, staffing, and maintaining of the career centers in the middle schools and the high schools was a major accomplishment. However, the responsibility of constantly advising teachers of the services available in the centers, as well as compilation of files of community resource people, scheduling and clerical duties of student field trips, and counseling sessions with students involved in investigation of occupational clusters, imposed an unrealistic work load on these dedicated individuals.

Penetration Achieved in Inservice Training Sessions

As previously mentioned, inservice training sessions for all school personnel involved in career education were to have been scheduled and conducted by designated individuals in each of the evaluated school districts.

In Houston, the Career Awareness Coordinator and the staff of trained consultants conducted the majority of the inservice sessions for elementary teachers and counselors. The project director and the coordinator for occupational orientation activities at the middle school level conducted a series of inservice sessions for teachers assigned to the special classes at the middle school level. The training sessions were scheduled in conjunction with the preschool activities attended by all HISD personnel. In addition, some were scheduled at the end of the regular school day. In some recorded instances, informal sessions were held with elementary school principals and faculty members in the weekly faculty meetings.

One purpose of the research and development component of the Harlandale proposal was to develop a program of teacher training designed to assist each teacher to learn to recognize the occupational relevance of each concept taught in all subject fields to which he is assigned and, secondly, to help the student understand the significance of such relevance to those careers in which he may have an interest. The team of coordinators assigned to develop this training project were primarily to serve as resource persons to the teachers. This supportive activity was to include organizing and conducting training sessions. Since many concepts are formed and developed at the elementary and middle school level, it was considered imperative that the teaching staff be assisted by guidance counselors adequately trained in child development and career awareness. Individual and group guidance beyond the ability of the teacher would be provided as needed by the counselor. Though the emphasis in guidance provided through this program was oriented primarily toward career development, all aspects of child development were included. The community involvement component of the Harlandale proposal listed as one of the duties of the appointed coordinator the development of inservice programs which would serve to engender understanding, cooperation, and general interest with all concerned in this liaison effort.

The Fort Worth proposal outlines a scheduled program of inservice sessions for teachers, counselors, and advisory personnel at all levels, K-12. One week in the month of August, 1972, designated by the district administration for inservice education, was devoted to career education. Thus, teachers were introduced to the basic concepts of the total program as well as acquainted with the specific techniques and materials to be used at each grade level. Each counselor involved in the career awareness program was provided with three weeks of inservice education in July and August, 1972. This inservice education included familiarization with the career development theory and involved opportunities for the counselors to explore the world of work and gain an appreciation for the dignity of work at whatever level of endeavor. The counselors were oriented to an emphasis on the school's responsibility toward placing each student exiting from the system in a job, in a post-secondary occupational program, or in a baccalaureate program. The inservice education program was planned and conducted by the Division of Vocational-Industrial Education in cooperation with the Department of Teacher Education and the Division of Special Services. The proposal further stated that extensive inservice education would be continued throughout the 1972-73 academic year.

One method by which the effectiveness of these inservice sessions may be evaluated is by quantitative data recorded by teachers and counselors on the number of days each one interviewed spent attending such sessions. In Houston, one half of the teachers and one fifth of the counselors reported they had attended an average of two days inservice for career education. Less than half of the administrators stated teachers had been provided released time to attend inservice sessions. In Harlandale, only one counselor had not attended any inservice meetings, but almost three fourths of the teachers had not attended these scheduled sessions. The majority of the administrators were not aware of released time being provided teachers for attendance at inservice sessions. More than three fourths of the teachers in the Fort Worth project reported they attended inservice sessions for career education. Other than the three weeks of inservice training preceding the implementation activities during the 1972-73 school year, only one half of the Fort Worth counselors reported they were attending inservice sessions for career education on a continuing basis. All of the administrators interviewed stated their teachers had been provided from one to three days for inservice sessions.

In each of the three districts, major emphasis was placed on the training of involved school personnel to understand the concepts of career education, to become familiar with career oriented curriculum material, to explore and develop the most effective techniques and procedures for presenting occupational information to students, and to become familiar with information systems established to provide feedback which would facilitate necessary revisions in all areas of implementation. If those who are most intimately involved with students on a daily basis are not relating these sessions to their preparation for successful awareness and investigative endeavors in career education, their lack of training should be apparent in classroom activities. On the other hand, if the scheduled inservice meetings did not provide school personnel with the kinds of relevant and practical information deemed necessary for successful implementation, then failure to attend inservice sessions may not affect classroom implementation.

The attitudes and opinions of teachers and counselors regarding the necessity for inservice sessions in understanding the concepts of career education and their views on the importance of infusing academic curricula with occupational information offer other areas for consideration in evaluating the success of the inservice training methods employed by each of the three districts.

Three fourths of the teachers in Houston Independent School District indicated by their recorded responses that inservice sessions were necessary to understand the concepts of career education, and approximately the same percentage agreed that occupational information should be included in every subject offered. However, less than half of those interviewed were actually including this information in their daily presentations. The counselors reported that, in their opinion, there was an increase in the number of academic teachers including occupational information in their presentations. HISD consultants and monitors reported the number of teachers using career related material had increased to 75 percent by the end of the school year.

The majority of the teachers in the Harlandale project sites stated they considered inservice sessions a necessity, and this same number also thought occupational information should be included in every subject. In this district, more than half of the teachers said they were including this information in their daily presentations. Again, the counselors reported they believed more academic teachers were presenting this information. There was no measured increase or change in these responses from one interview to another.

The teachers interviewed in the project sites in Fort Worth were in agreement that inservice sessions were necessary to understand the concepts of career education. A significant decrease was noted during the evaluation period, in those who felt occupational information should be included in every subject matter presentation. Although over half of the teachers at the beginning of the school year agreed this material should be included, less than half of the teachers were reported as personally using the information. Final data recorded regarding the number of academic teachers using occupational information show a marked increase in responses from teachers.

Counselors agreed that they thought teachers of academic subjects were increasingly presenting occupational information to their students. Apparently the Fort Worth teachers were expressing second thoughts as to the importance of the occupational information, although more teachers were reported as using it.

The funded school districts were each unique in regard to the length of time each had been implementing career education and the focal points for major emphasis in the period selected for evaluation. Houston was primarily involved in continuing developmental activities at the awareness level; Harlandale was continuing curriculum development at all levels and beginning project-wide implementation; Fort Worth was experimenting with possible techniques for total involvement of all schools and students and was focusing its activities on providing awareness of the career education concepts to achieve commitment to the project from all school personnel. With these factors in mind, it appears that the inservice training offered by each district could have been better organized, that these sessions should either have been scheduled for attendance during professional days, or school personnel should have been provided released time to attend the inservice meetings for career education.

Effectiveness of Developed Curriculum Materials

Having examined the effectiveness of staff utilization and the methods employed to furnish essential information to those most involved in the implementation of career education, it becomes necessary to review the opinions and attitudes of teachers toward the curriculum materials they received and the techniques and procedures selected by this group to use the provided material.

The Occupational Awareness Coordinator and staff of consultants in the Houston Independent School District were continuing development of occupational information inserts to be infused into presentations in the elementary social studies classes. With an increasing emphasis on career education for all students in all classes, the consultants were continually providing information and materials to their assigned project sites. The teachers interviewed reported receiving continuous assistance in the collection and analysis of material with occupational content, and by the end of the school year, three fourths of the teachers reported they were using career oriented materials. With the opening of the career centers, teachers had an opportunity to examine and request an increasing variety of carefully selected materials suitable for student needs at all levels.

The recorded reactions to the materials and techniques selected demonstrate that those teachers who were receiving the information and using it were favorably impressed with the content, format, and suggestions for activities chosen to offer each student material relevant to his individual needs. Regardless of the grade level, students were having positive experiences with community resource people, and an increasing number of parents were cooperating as role models.

The Harlandale teachers were receiving assistance from the counselors and the coordinator when the curriculum guides were delivered. However, this district experienced delays in the printing and distribution of curriculum guides until the middle of the second semester. Teachers who had received the guides reacted favorably to them, stating they were interesting, provided good ideas, and helped them relate their subject matter to occupational choices. They were using the activities suggested in the curriculum guides in their teaching, and they also reported students were enjoying more practical discussions about possible future careers.

Whereas both of the school districts examined in the preceding discussion were revising and developing curriculum materials for use in their project sites, the emphasis in Fort Worth was directed toward presenting teachers with the knowledge of a variety of available materials which could be purchased and then revised and adapted by the individual teachers to best serve the needs of their student groups. The project directors and designated groups of teachers and counselors had conducted an extensive investigation into the content and format of career oriented curriculum matter which was currently available from a number of reliable resources. It was the consensus of these groups that teachers should be permitted to select the materials and adapt them in any way which would best achieve the anticipated outcomes. Although tentative curriculum guides in elementary social studies had been developed by a committee of teachers, counselors, and administrative personnel in the planning phase of the project, this activity was suspended in consideration of the consensus that the implementation objectives could be achieved without further emphasis in the direction of curriculum development.

The career centers which were provided in the middle schools and the high schools permitted students, teachers, counselors, and members of the community an opportunity to explore and investigate occupational possibilities in all of the recognized career clusters. Counselors and their assigned aides were staffing the centers for maximum use by all school personnel on a scheduled, as well as an unscheduled, basis.

The Fort Worth teachers expressed satisfaction with the materials they had examined and further stated the materials had helped them relate their subjects to career education. The activities suggested by counselors, as well as those listed in some of the curriculum guides, were most frequently mentioned as the techniques the teachers employed in their presentations.

In summation of the effectiveness of the explored techniques for maximum utilization of developed and/or purchased curriculum material, it appears that the presence of trained personnel in the schools on a daily basis best serves the needs of those involved in career education implementation. The establishment of the career centers in two of the districts provided not only the most comprehensive means for collecting printed matter of all kinds, but also furnished a central location for students and other school and community personnel to use the audio-visual equipment and supplies which are a necessity for presenting current occupational information to a heterogenous group.

In-house Evaluation Procedures

The evaluating procedures selected by each of the three districts varied with respect to the personnel involved, the development of instruments for measuring change, the degree of implementation achieved in the project sites prior to the external evaluation period, and the objectives in the funded proposal.

The Research Services Department of the Houston Independent School District supervised the evaluation procedures implemented for the awareness level of the project. In order to obtain systematic data on the programmatic activities at the elementary project sites, a team of monitors visited and observed each of the 36 schools at regular intervals throughout the school year. Monthly reports were made by the monitors, and their observations and data were analyzed for identification of areas which appeared to need revision or a change in emphasis.

An additional evaluation activity was instituted in January, 1973. At that time, an instrument was introduced for project site principals to use when reporting the types and depth of the implementation activities for career education in their schools. Thus, the project directors were receiving reports from two experienced sources containing current information which could be utilized for updating implementation activities.

The development and administration of testing instruments designed to measure the level of awareness of elementary students as a result of their experiences with the concepts of career education was another method of evaluation which was supervised by the Research Services Department. Two levels of the instrument (HOAI) were developed: primary, K-2; and intermediate, 3-6. A team of teachers was trained to administer the tests to selected groups of elementary students. The pre-test instrument was administered in September, 1972, and the post-test was given to the students in April, 1973. The final results reported by the Research Department did not reflect a significant difference between the pre-test and post-test scores.

An analysis of the interview data recorded from teachers in the Houston Independent School District reveals that the majority were not aware of any evaluation activity. In view of the fact that elementary students were being tested for their awareness of career education concepts, it is possible the teachers were not equating this procedure with district evaluation.

In both the elementary and middle school components of the Harlandale Independent School District proposal for career education, objectives for evaluation were formulated. The objective for the elementary schools stated that the research coordinators, in cooperation with the project director, would develop and conduct a program of continuous evaluation and revision to assure that both material and methods were kept up to date. The middle school component was to provide for corrective feedback based upon evaluation of achievements of the program.

Pre-inventory and post-inventory tests were devised to assess the effectiveness of the various treatments in terms of student outcomes.

Although the report of the completed analysis of the test scores had not been distributed at the end of the evaluation period, indications from counselors and coordinators were that no significant response patterns were emerging.

The counselors and resource teachers at the elementary and middle school project sites were in continuous contact with teachers who had received curriculum guides developed by the research coordinators. The feedback concerning the effectiveness of the material presented by the teachers primarily consisted of informal reports to the counselors who relayed this information to the project director in charge of the material development center. The middle school counselors were recording quantitative data on the number of students requesting occupational information, the number of students receiving counseling toward possible career choices, and the enrollment figures for the occupational orientation classes.

As was previously reported in the chapter concerned with analysis of the interview responses, the Harlandale teachers and counselors were uncertain as to the possible continuation of the career education emphasis in their schools. In addition, only ten percent of the teachers stated they were aware of any evaluation being conducted in their schools. Consideration of these responses supports the observations of the evaluator that a coordinated system of evaluation was apparently still in the planning stage for the Harlandale career education development project.

Statements from the proposal presented by the Fort Worth Independent School District concerning evaluation refer to pre- and post-tests as well as other tests which would be administered throughout the operation of the program at the elementary and middle school level. A slightly rephrased statement concerns evaluation of the high school component; i.e., valid, reliable pre- and post-tests would be used to assess the effectiveness of the various treatments in terms of student outcomes. The guidance and counseling component listed one of the characteristics of that component as corrective feedback based on evaluation of program achievements. Accurate records regarding methods and procedures were to be maintained to yield data essential to potential transportability of the components.

The initial visits of the external evaluator with the members of the project staff elicited the information that plans had not been completed for a system of evaluation to measure effectiveness of the ongoing implementation activities. In addition, the coordinator had anticipated that the pre- and post-tests to measure student progress would be developed by the agency conducting the external evaluation. Eventually, a decision was made by the administrators of the Fort Worth project that the primary emphasis toward awareness and commitment to the concepts of career education would preclude attempts to effectuate a student testing program for the 1972-73 school year.

Teachers responding to the interview questions regarding evaluation were unaware that any system had been established, if indeed there was one in operation. The middle school teachers conducting classes of orientation and investigation, and the counselors staffing the career centers, were collecting quantitative data regarding student visitations, requests for occupational information, and student enrollment in special classes. The placement coordinator had conducted surveys to determine potential student needs in relation to employment and/or continued education. A follow-up study was also being conducted to provide data on exiting and graduating students for a five year period.

The proposed systems of evaluation by the three involved school districts were actually realized by only one--Houston. The Houston Independent School District design for evaluation by designated units of the school system was implemented in the proposed components. The lack of awareness of such procedures as reported by teachers may possibly be attributed to their failure to attend inservice sessions for career education. The counselors did not appear to have been involved to any extent so far as recording factual information at either the elementary or middle school level.

Although the pre- and post-testing of students in the Harlandale project sites was implemented, teachers involved in implementation of career education activities were not generally knowledgeable of any overall system of evaluation which may have been instituted by the project directors.

The evaluation procedures to be implemented in the Fort Worth project sites apparently are still in the experimental and planning stage.

In any educational endeavor, the project design and proposed objectives for every component are directed toward an identifiable target--the student. The impact of experimental procedures in curriculum development, testing programs, subject matter offerings, and implementation activities will be reflected by the primary recipients in the classrooms. As stated in the proposal of evaluation design formulated by the University of Houston, Center for Human Resources, "the overall evaluation of all three programs would analyze the impact on those students involved in the program; i.e., 'student outcomes in relation to the treatments attempted.'"

Student Outcomes

The foregoing discussion has explored the evaluation procedures proposed and implemented in the three designated school districts. To further analyze the effectiveness of the proposed career education implementation in each of these school systems, data were recorded which reflected anticipated student outcomes and the attitudes and opinions of teachers and counselors in relation to the success of these efforts.

The Research Services Department of the Houston Independent School District formulated the hypothesis that significant differences would be measured between the pre- and post-test scores of students attending schools in which the career education awareness program had been implemented. The results of the test scores did not support the hypothesis.

The Houston proposal states that at the elementary level children should develop occupational awareness so that they may begin to formulate career thoughts, orientations, and goals based upon adequate knowledge. In the junior high school, students should attain an understanding of the economic and industrial system within which careers function along with exposure to the broad range of occupational choices and a working knowledge of the requirements and advantages of each.

The anticipated outcomes postulated by teachers for student achievement are generally reflected by attitude and interest changes which can be measured by observation, requests for information, and involvement by students in the activities suggested. The Houston teachers responding to interview questions regarding anticipated student outcomes considered the development of proper attitudes toward school, work, and society as important as the knowledge of a wide variety of career choices. The majority of the teachers also expressed the opinion that the concepts of career education provide a good method for helping young people understand themselves. An additional agreement was recorded to the statement that career education offers every individual a better chance to achieve job satisfaction. The Houston teachers felt that the objectives had been achieved because students were expressing more interest in classroom projects involving occupational information and were selecting more practical career choices for further investigation and exploration. Of the counselors interviewed, less than half stated they were doing more occupational counseling since the inception of career education in their schools.

The guidance and counseling component of the Harlandale Independent School District proposed several objectives for achievement in the elementary project sites. Two of these objectives relate to anticipated student outcomes. A planned program would be developed to assist the teachers to guide children through career development experiences. The other objective stated counselors would assist teachers in helping children to develop positive self concepts through the career education project.

Two of the middle school objectives were to counsel pupils concerning their interests, aptitudes, and abilities as they affect career plans and to provide assistance to pupils in planning their programs of study toward career goals.

The interview responses indicate the teachers were in agreement that career education offered every individual a better chance to achieve job satisfaction, and also they thought the concepts helped young people understand themselves. Less than half of the teachers responded to statements concerning whether students were making wiser career choices or were noticeably more aware of career opportunities. Of those who did reply, more than half responded affirmatively to the statements. The Harlandale teachers anticipated students would become familiar with a wide variety of career choices, would develop positive attitudes toward the world of work, and would develop a good self image. Teachers reported students were becoming increasingly interested in lessons containing occupational information.

The Harlandale counselors reported an increase in student requests for occupational counseling and information, and they also stated there was an increase in student awareness of possible career choices.

The Fort Worth proposal listed some of the needs which could be fulfilled by implementation of career education. In the elementary schools, the program should be designed to increase career awareness of students in terms of many options open to them in the world of work, to develop favorable attitudes toward the dignity of work, and to develop awareness of personal satisfaction derived from successful performance in an occupation. Data recorded from interviewed teachers indicate they thought students were more aware of career opportunities because they demonstrated more interest in discussions about occupational choices. The increased student attendance at the career centers was further evidence of the interest and awareness exhibited by the students. As was previously stated, student measurement devices were not developed during this funded project period. The Fort Worth counselors were recording student visits to the career centers, requests for occupational information, and student requests for occupational counseling and reported increases in all three.

Those who developed the student measuring devices in Harlandale and Houston apparently assumed that positive comparisons could be made between students who were involved in the career education development programs by measuring an anticipated awareness increase. The recorded data resulting from test scores used to measure awareness changes in students reveal no significant differences had occurred from one testing period to the other. Whereas teachers and counselors expressed favorable opinions toward the achievement of student related objectives, the data recorded from test scores do not factually support these opinions. Therefore, the effectiveness of the treatments attempted appears to depend upon observations by teachers and counselors and records of student requests explained above.

With continued emphasis on the implementation of career education, and time to experiment with and revise different forms of student measuring instruments, it is probable that an effective system will be developed for continuous evaluation of the methods and treatments attempted in those districts where such alterations are deemed to be a necessity.

Continuity Between Program Components

Students do not singly develop efficiency in relating concepts to practical applications for solutions to particularized situations. All of the information accepted by a student in the learning process is collated with that received from other instructional sessions and resources. Therefore, it is not possible to adjudge that learning has been accomplished, or that the information proffered is sufficient for a solution to any potential problem in the educational or private life of that individual. To successfully implement a career education development program in a school district, whether there be few or many selected project sites, a structured and relevant procedure for establishing continuity between and within all the related components is a necessity.

To this end, the evaluation included the observations of the evaluator as well as recorded data retrieved from interviews with counselors and administrators relating to either the present or proposed system for coordinating career education in the project schools.

Each of the examined proposals from the participating school districts of Houston, Harlandale, and Fort Worth contained statements relating to the procedures which would be, or had been, effectuated for communication between all components of the programs, as well as a structure for coordinating implementation from one component to the other.

The Houston implementation in the elementary schools had increased from the initial involvement with the social studies curriculum to include all the academic disciplines and the consequent involvement of all teachers and students in the project sites. A scope and sequence plan based on the concepts outlined by TEA had been adopted by the Houston project directors. The curriculum materials collected and compiled by both the occupational awareness staff and the occupational orientation coordinator reflected these concepts.

The other aspects of the program which have been examined and reviewed in the preceding discussions illustrate the areas in which communication has not been so effective as was proposed. A question appearing on the interview forms for teachers, counselors, and administrators concerned their awareness of a plan for coordinating career education, K-12, in their school district. Two thirds to three fourths of the teachers in all three districts reported they were aware of such a plan for continuity. One half of the counselors in Houston and all of the counselors in Harlandale and Fort Worth were aware of these plans for their districts. The same figures for each district were recorded by administrators.

Both Fort Worth and Houston were considering expansion of career education for the coming school year, 1973-74. A comprehensive review of all the activities in career education implementation which were completed during the period designated in the proposals should reveal the strengths and weaknesses demonstrated by all the involved components. Likewise, the decision to continue implementation in Harlandale presumably would depend upon the validity of the feedback information received from those actively involved in implementation.

The analysis of data recorded from interviews, as well as consideration of the actual data realized, and the review of the effectiveness of the implementation activities undertaken in each of the three districts should offer the project directors the comprehensive information required for such decisions.

Retrospection

Career education, as viewed by the majority of authorities currently reacting to the implementation activities occurring throughout the nations' schools and universities, relates primarily to a concept of learning which embraces the total experiences of an individual in education and social situations. Acceptance of the importance and relevance of this concept presupposes a redirection of established educational procedures in presenting general curricula to students regardless of their personally perceived objectives. In essence, career education possesses the capability for offering every individual satisfying experiences in work, school, and society. A need often expressed is that each person be permitted opportunities to develop his talents and personal convictions toward a meaningful, purposeful existence. Comprehensive planning and well organized implementation of career education should achieve these goals.

The administrators and project directors of the school systems selected as pilot sites for career education developmental activities had conducted extensive investigations into the needs of their target populations. As a consequence, their proposals reflected both the awareness of the concept as perceived by leading authorities, and the areas in their own districts which could most easily adapt to the infusion of the career education concepts.

The evaluation of these districts exhibits the implementation treatments effectuated by each district within the constraints of the proposal objectives. The results justify the decision of the funding agency in selecting the school districts of Houston, Harlandale, and Fort Worth as exemplary project sites for career education.

APPENDICES

APPENDIX A - 1

Interview Form for Teachers

Phase I

1. What, in your opinion, are the objectives of career education in your school?

   Do you think these objectives can be achieved?
   - ☐ Yes
   - ☐ No

   If no, why not?

2. Have you had training in recognizing and utilizing career education concepts?
   - ☐ Yes
   - ☐ No

3. Did you attend in-service sessions for career education?
   - ☐ Yes
   - ☐ No

   How much time was spent? Number days _________

   Who conducted the in-service sessions for career education?
   - ☐ Coordinator
   - ☐ Principal
   - ☐ Consultant
   - ☐ Counselor
   - ☐ Other ____

4. To what extent were you involved in preparation of career education curriculum materials?
   - ☐ Not at all
   - ☐ Some
   - ☐ Actively participated

5. Were you provided released time to help in preparation of career education curriculum materials?
   - ☐ Yes
   - ☐ No

   If yes, how much time? Number days _________

6. Do administrative and/or supervisory personnel meet periodically with teachers to discuss career education?
   - ☐ Yes
   - ☐ No

   If yes, how often? Number of meetings per semester _________

7. Do you receive periodic assistance in collecting and analyzing career education information and materials?

( ) Yes
( ) No

If yes, from whom:
( ) Consultant
( ) Coordinator
( ) Counselor
( ) Other ______________________________

8. Do you feel the curriculum materials you have received on career opportunities have helped you?

( ) Yes
( ) No

If yes, how?

If no, why not?

9. What facilities are available to you in career education which were formerly not utilized?

( ) AVE materials
( ) Mini-career centers
( ) Library Career Corners
( ) Bulletin boards
( ) Community resource personnel
( ) Other ______________________________

10. Are you using any techniques or procedures in teaching career education concepts which are different from those formerly used?

11. Have your students observed career education activities in other schools?

( ) Yes
( ) No

If yes, how often? Number times ________

If yes, please describe.

If no, why not?

12. In what ways does your principal support career education?

13. What single change would you make in career education in your school? __________

( ) No change

14. Are career education concepts a part of your daily presentations in all subjects?

( ) Yes
( ) No

15. What student outcomes do you anticipate as a result of experiences in career education?

16. Since career education concepts have been included in the curriculum, are students more aware of career opportunities?
( ) Yes
( ) No

If yes, in what ways?

17. To your knowledge, is career education in your school being evaluated by an in-house organization?
( ) Yes
( ) No

If yes, by whom?

18. What techniques or procedures would you recommend teachers use in the selection of materials for career education?

19. Have you ever been employed by business or industry?
( ) Yes
( ) No

If yes, what type(s) of position did you hold? ____________________________

When did you work? Year(s) __________

For how long a time did you work? Years __________

20. When were you last enrolled in college courses? Year __________

21. How many years have you been teaching?

	1 strongly agree	2 agree	3 disagree	4 strongly disagree
22. in-service sessions are necessary to understand the concepts of career education	1	2	3	4
23. career education could help reduce the number of dropouts	1	2	3	4
24. career education is the same as vocational or industrial education	1	2	3	4
25. it takes more time to prepare lessons with occupational content than those for the regular curriculum	1	2	3	4
26. career education could help solve unemployment problems in this area	1	2	3	4
27. teachers should be allowed to participate in career education on a voluntary basis only	1	2	3	4

		1 strongly agree	2 agree	3 disagree	4 strongly disagree
28.	college courses should include concepts of career education	1	2	3	4
29.	teachers should receive extra remuneration to prepare career education curriculum materials	1	2	3	4
30.	many high-salaried jobs do not necessarily require a college degree	1	2	3	4
31.	career education offers every individual a better chance to achieve job satisfaction	1	2	3	4
32.	the concepts of career education provide a good method for helping young people understand themselves	1	2	3	4
33.	occupational information should be included in every subject offered	1	2	3	4
34.	the objectives of career education are unrealistic	1	2	3	4
35.	students involved in career education are making more realistic career choices than those not involved in this program	1	2	3	4
36.	teachers of traditional academic courses are including occupational information in their class presentations	1	2	3	4
37.	my own knowledge of occupational information has increased	1	2	3	4
38.	since career education concepts have been included in the curriculum, students are noticeably more aware of career opportunities	1	2	3	4

APPENDIX A - 2

Interview Form for Teachers

Phase II

1. Is your school actively involved in career education?
   - ☐ Yes
   - ☐ No

2. How many days of in-service training in career education were provided teachers in your school this semester?
   - ☐ None
   - ☐ 1
   - ☐ 2
   - ☐ 3
   - ☐ 4
   - ☐ 5
   - ☐ 6
   - ☐ 7
   - ☐ 8 or more

3. Who conducted the in-service sessions for career education?
   - ☐ Coordinator
   - ☐ Principal
   - ☐ Consultant
   - ☐ Counselor
   - ☐ Other ________________________

4. Were teachers in your school provided released time for the development of career education materials?
   - ☐ Yes
   - ☐ No

5. Check any of the listed items which describe the objectives for career education in your school.
   - ☐ a concept of self which is in keeping with a work oriented society
   - ☐ positive attitudes about work, school and society
   - ☐ a sense of satisfaction resulting from successful experiences in work, school and community
   - ☐ personal characteristics of self-respect, self-reliance, perseverance, initiative and resourcefulness
   - ☐ a realistic understanding of the relationship between the world of work and education
   - ☐ a comprehensive awareness of career options in the world of work
   - ☐ the ability to enter employment in an appropriate occupation at a productive level and/or to pursue further education

6. Check any of the listed items which express your reaction to career education curriculum materials.
   - ☐ have not received any
   - ☐ provided variety in making information more effective and realistic for students
   - ☐ students are interested and impressed with number of jobs available
   - ☐ assisted me in planning activities and selecting appropriate audio-visual materials
   - ☐ helped me understand how to teach and relate my subject to career education
   - ☐ offered abundance of new ideas and materials
   - ☐ no consideration given to students with learning disabilities
   - ☐ material too advanced for elementary students
   - ☐ do not have time to teach any other subjects in my crowded schedule

7. Check any applicable techniques or procedures which you use only in teaching career education concepts.
   - ☐ using activities suggested in curriculum guide
   - ☐ use of parents as role models
   - ☐ making career information part of every subject taught
   - ☐ using community resource people as speakers in all grade levels
   - ☐ using specific assignments from business and industry as classroom projects
   - ☐ more practical discussions of attitudes and opportunities for achieving success in adult life
   - ☐ using video tape to analyze interview techniques
   - ☐ elementary students set up and operated grocery store
   - ☐ students wrote and presented TV commercials for analysis by class

8. Have your students observed career education in other schools?
   - ☐ Yes
   - ☐ No

   If yes, briefly describe ____

9. What single change would you make for career education in your school?

- ( ) none
- ( ) expand services to students
- ( ) involve more teachers
- ( ) offer more guidance and counseling services
- ( ) better teacher preparation
- ( ) better selection of students
- ( ) more materials and resource centers
- ( ) drop the program
- ( ) other (please explain) ______________________

10. Check those items which indicate the ways in which your principal supports career education in your school.

- ( ) encourages field trips and use of resource personnel
- ( ) cooperates fully with career counselor and/or consultant
- ( ) provides time in faculty meetings for discussions on importance of career education
- ( ) does not interfere with teachers' lesson plans
- ( ) cooperates in arranging in-service sessions
- ( ) interested in creative efforts of teachers
- ( ) limited time allowed for career education activities
- ( ) assigns discipline problem students to career education teachers
- ( ) invites teachers to visit career resource centers

11. Check the achievements listed below which you anticipate will be reached by your students as a result of experience in career education.

- ( ) students will be familiar with a wide variety of job opportunities
- ( ) students will possess a broader knowledge of the importance of making a wise career choice
- ( ) students will have a greater awareness of themselves and their role in society
- ( ) encourages students to complete their high school education
- ( ) offers an opportunity for a better understanding of why academic subjects are important
- ( ) students will understand the importance of getting along with other people
- ( ) more students will achieve success on their jobs
- ( ) other (please explain) ______________________

12. The number of academic subject matter teachers including occupational information in their presentations is noticeably increasing.
    - ☐ Yes
    - ☐ No

13. In your opinion, what means should be used for evaluating career education in your school? Check any statements which are applicable.
    - ☐ instruments which would measure student attitudes toward world of work
    - ☐ observation results by teachers
    - ☐ compare student interest with those not involved in career education
    - ☐ establish follow-up program
    - ☐ based on stated objectives
    - ☐ evaluate effectiveness of in-service sessions
    - ☐ students, parents, teachers given opportunity to express their views on career education
    - ☐ ask consultants and/or counselors
    - ☐ other (please explain) ______________________________

14. To your knowledge, is there a well defined plan in your district for coordinating career education from elementary to middle to high school levels?
    - ☐ Yes
    - ☐ No

15. Of the procedures and techniques listed below, which ones would you recommend teachers use in selecting career education materials?
    - ☐ select material which can easily be adapted to needs of individual students
    - ☐ choose material of high interest level
    - ☐ material should be relevant, timely and comprehensible
    - ☐ let counselors and consultants choose
    - ☐ entire staff should be involved in review and selection process
    - ☐ avoid essentially commercial material
    - ☐ carefully check the reading level
    - ☐ provide time for consultants to inform teachers about available material and proper use of it
    - ☐ other (please explain) ______________________________

		1 strongly agree	2 agree	3 disagree	4 strongly disagree
16.	in-service sessions are necessary to understand the concepts of career education	1	2	3	4
17.	career education could help reduce the number of dropouts	1	2	3	4
18.	career education is the same as vocational or industrial education	1	2	3	4
19.	it takes more time to prepare lessons with occupational content than those for the regular curriculum	1	2	3	4
20.	many high-salaried jobs do not necessarily require a college degree	1	2	3	4
21.	career education offers every individual a better chance to achieve job satisfaction	1	2	3	4
22.	occupational information should be included in every subject offered	1	2	3	4
23.	the objectives of career education are unrealistic	1	2	3	4
24.	teachers should be allowed to participate in career education on a voluntary basis only	1	2	3	4

APPENDIX A - 3

Interview Form for Counselors

Phase I

1. Do counselors maintain communication with teachers involved in career education?
   ( ) Yes
   ( ) No

2. Are comprehensive files of current information in the following areas organized and maintained by the counseling staff?

   educational opportunities including scholarships
   ( ) Yes
   ( ) No

   current occupational information
   ( ) Yes
   ( ) No

   community educational opportunities
   ( ) Yes
   ( ) No

   local occupational opportunities and work-study plans
   ( ) Yes
   ( ) No

3. Is the guidance staff accessible to all students? ( ) Yes ( ) No

   To all parents? ( ) Yes ( ) No

4. Are individual interviews with counselors provided for every secondary student at least once a year?
   ( ) Yes
   ( ) No

   Was this done before career education was implemented?
   ( ) Yes
   ( ) No

5. Is provision made for counselors to work with groups of students?
   ( ) Yes
   ( ) No

   If yes, what provisions?

6. Are employment opportunities available to students below age 14?
   ( ) Yes
   ( ) No

   If yes, what types of opportunities?

7. Have you been doing more occupational counseling since career education was implemented?
    ( ) Yes
    ( ) No

8. Is there an advisory committee working with the counseling staff?
    ( ) Yes
    ( ) No

    If yes, in what way?

9. Does the guidance staff review and revise its program annually?
    ( ) Yes
    ( ) No

10. What type of sequential program of guidance testing is being used by the counselors?

    Is this different from what you were doing before career education was implemented?
    ( ) Yes
    ( ) No

11. Are counselors attending in-service sessions on career education?
    ( ) Yes
    ( ) No

    If yes, how often? __________ days

12. How do you project future occupational requirements for your area?

13. What criteria are considered relevant for enrollment in occupational classes?

14. What criteria do you consider relevant to an on-going evaluation of career education in your school?

15. What single change would you make in career education in your school?

		1 strongly agree	2 agree	3 disagree	4 strongly disagree
16.	students involved in career education are making more realistic career choices than those not involved in this program	1	2	3	4
17.	a significant increase in requests from students for occupational information has occurred since career education courses were added to the curriculum	1	2	3	4
18.	potential dropouts are experiencing success in career orientation classes	1	2	3	4
19.	study tours would increase student interest in local employment possibilities	1	2	3	4
20.	teachers of traditional academic courses are including occupational information in their class presentations	1	2	3	4
21.	more career education centers should be available to students at all grade levels	1	2	3	4
22.	my own knowledge of occupational information has increased	1	2	3	4
23.	since career education concepts have been included in the curriculum, students are noticeably more aware of career opportunities	1	2	3	4
24.	career education objectives can be achieved	1	2	3	4

APPENDIX A - 4

Interview Form for Counselors

Phase II

1. Do counselors maintain communication with teachers involved in career education?
   - ( ) Yes
   - ( ) No

2. Are comprehensive files of current information organized and maintained by the counseling staff in the following areas?

   current occupational information
   - ( ) Yes
   - ( ) No

   community educational opportunities
   - ( ) Yes
   - ( ) No

   local occupational opportunities
   - ( ) Yes
   - ( ) No

3. Are individual counselor interviews provided for every student at least once a year?
   - ( ) Yes
   - ( ) No

4. Is provision made for counselors to work with groups of students?
   - ( ) Yes
   - ( ) No

   If yes, check answers below
   - ( ) subject matter grouping
   - ( ) grade level grouping
   - ( ) occupational interest
   - ( ) other (please explain) ________________________

5. Check any procedure used to obtain employment for students 14 years of age and under in your school(s).
   - ( ) none
   - ( ) teachers find jobs for students
   - ( ) counselors maintain job opportunity files
   - ( ) principal maintains job opportunity file
   - ( ) referrals made to school placement offices
   - ( ) other (please explain) ________________________

6. Have you been doing more occupational counseling since career education was implemented in your school?
   ( ) Yes
   ( ) No

7. Is there an advisory committee working with the counseling staff?
   ( ) Yes
   ( ) No

8. Which of the following best describes the guidance testing program in your school?
   ( ) it was discontinued
   ( ) never established one
   ( ) use standardized tests
   ( ) testing restricted to certain grade levels (indicate which ______________________)

9. What single change would you make for career education in your school?
   ( ) none
   ( ) expand services to students
   ( ) involve more teachers
   ( ) offer more guidance and counseling services
   ( ) better teacher preparation
   ( ) better selection of students
   ( ) more materials and resource centers
   ( ) drop the program
   ( ) other ____________________________________

10. Information about jobs which may be available 5-10 years from now in your area can be obtained from which of the following:
   ( ) current trade journals
   ( ) Employment Commission
   ( ) school placement officers
   ( ) local Chamber of Commerce
   ( ) local labor union representatives
   ( ) U. S. Census
   ( ) U. S. Department of Labor
   ( ) community business leaders
   ( ) other ______________________________________

11. If your school has separate classes for career education, what qualifications must a student possess to enroll in such a course?

- ☐ certain grade level (indicate which ______________________________)
- ☐ potential dropout
- ☐ fairly good or average grades
- ☐ non-academically oriented students
- ☐ referral by teacher
- ☐ student preference
- ☐ student interested in learning a skill
- ☐ other (please explain) ______________________________

12. The number of academic subject matter teachers including occupational information in their presentation is noticeably increasing.

- ☐ Yes
- ☐ No

13. In your opinion what means should be used for evaluating career education in your school? Check any statements which are applicable.

- ☐ instruments which would measure student attitude toward world of work
- ☐ observation results by teachers
- ☐ compare student interest with those not involved in career education
- ☐ establish follow-up program
- ☐ based on stated objectives
- ☐ evaluate effectiveness of in-service sessions
- ☐ students, parents, teachers given opportunity to express their views of career education
- ☐ ask consultants and/or counselors
- ☐ other (please explain) ______________________________

14. To your knowledge, is there a well defined plan in your district for coordinating career education from elementary to middle to high school levels?

- ☐ Yes
- ☐ No

15. How many days of career education in-service training did you attend this semester?

- ☐ None
- ☐ 1
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5
- ☐ 6
- ☐ 7
- ☐ 8 or more

APPENDIX A - 5

Interview Form for Administrators

Phase I

1. Is your school community actively involved in career education ?
   ( ) Yes
   ( ) No

2. How much time was provided for teachers to attend career education in-service sessions? ____________________________

3. Do local advisory committees participate in the planning of career education in your school?
   ( ) Yes
   ( ) No

   If yes, how?

4. Were teachers provided released time for development of career education material?
   ( ) Yes
   ( ) No

5. What are career education objectives in your school?

6. Are these objectives in accord with the objectives for your total school program?
   ( ) Yes
   ( ) No

7. Do you feel that study tours are an integral part of career education?
   ( ) Yes
   ( ) No

   If yes, how many study tours are scheduled for classes involved in career education? ______________________________ semester

8. What are the strengths of career education?

9. What are the weaknesses of career education?

10. What single change would you make for career education in your school?

11. What direction do you feel career education should follow in the future?

12. What type of in-house evaluation is being conducted for career education?

13. What criteria do you feel should be used for such evaluation?

14. What criteria are used to measure continuity for career education for grades K-12?

15. Are career education classes elective for students in middle schools?
( ) Yes ( ) No

16. Do you have any further questions concerning this evaluation?

	1 strongly agree	2 agree	3 disagree	4 strongly disagree
17. more time should be spent in planning career education activities before implementation	1	2	3	4
18. teachers should receive extra remuneration to prepare career education curriculum materials	1	2	3	4
19. classes in career education should only be taught by teachers with vocational teaching certificates	1	2	3	4
20. the career education centers are necessary for the success of the program	1	2	3	4
21. results of in-house evaluations should be available to administrators upon request	1	2	3	4
22. career education concepts should be taught in every subject	1	2	3	4
23. the number of career education classes in the system should be increased	1	2	3	4
24. career education objectives can be achieved	1	2	3	4

APPENDIX A - 6

Interview Form for Administrators

Phase II

1. Is your school actively involved in career education?
   - ☐ Yes
   - ☐ No

2. How many days of in-service training in career education were provided teachers in your school this semester?
   - ☐ None
   - ☐ 1
   - ☐ 2
   - ☐ 3
   - ☐ 4
   - ☐ 5
   - ☐ 6
   - ☐ 7
   - ☐ 8 or more

3. Do local advisory committees participate in career education planning in your school?
   - ☐ Yes
   - ☐ No

4. Were teachers in your school provided released time for development of career education materials?
   - ☐ Yes
   - ☐ No

5. Check any of the listed items which describe the objectives for career education in your school.
   - ☐ a concept of self which is in keeping with a work oriented society
   - ☐ positive attitudes about work, school, and society
   - ☐ a sense of satisfaction resulting from successful experiences in work, school and community
   - ☐ personal characteristics of self-respect, self-reliance, perseverance, initiative and resourcefulness
   - ☐ a realistic understanding of the relationship between the world of work and education
   - ☐ a comprehensive awareness of career options in the world of work
   - ☐ the ability to enter employment in an appropriate occupation at a productive level and/or to pursue further education

6. How many field trips were scheduled in your school this semester as part of the career education experience?

( ) None
( ) 1
( ) 2
( ) 3
( ) 4
( ) 5
( ) 6 or more

7. Check the items which you believe to be strengths of career education in your school.

( ) increased student awareness to world of work
( ) curriculum materials are relevant and interesting
( ) services provided teachers by career counselors and/or consultants
( ) involvement of resource personnel in career education activities
( ) students developing positive self image
( ) other (please explain) ______________________________

8. Check the items which you believe to be weaknesses of career education in your school.

( ) inadequate communication systems with district administrators
( ) confusion as to objectives of career education
( ) lack of curriculum materials for all grade levels
( ) no time to properly train teachers in use of career education materials
( ) all students should receive information
( ) need trained personnel available in each school on a regular basis
( ) more funds needed for suggested activities

9. What single change would you make for career education in your school?

( ) none
( ) expand services to students
( ) involve more teachers
( ) offer more guidance and counseling services
( ) better teacher preparation
( ) better selection of students
( ) more materials and resource centers
( ) drop the program
( ) other (please explain) ______________________________

10. Check the listed items you feel indicate the direction career education should take in the future in your school.

- ( ) greater involvement of business and industrial community
- ( ) correlate with all subject matter
- ( ) all students should receive career information
- ( ) more effective teacher training programs
- ( ) all schools in the system should be involved
- ( ) carefully planned in-service for all school personnel
- ( ) other (please explain) ____________________________

11. The local school system is evaluating career education in my school.

- ( ) Yes
- ( ) No

12. Who is conducting the evaluation activities in question 11.

- ( ) Don't know
- ( ) Principal
- ( ) Counselor
- ( ) Consultant
- ( ) Research department
- ( ) Superintendent
- ( ) Subject matter supervisor
- ( ) Teachers
- ( ) Others (please explain) ____________________________

13. In your opinion what means should be used for evaluating career education in your school? Check any statements which are applicable.

- ( ) instruments which would measure student attitudes toward world of work
- ( ) observation results by teachers
- ( ) compare student interest with those not involved in career education
- ( ) establish follow-up program
- ( ) based on stated objectives
- ( ) evaluate effectiveness of in-service sessions
- ( ) students, parents, teachers given opportunity to express their views of career education
- ( ) ask consultants and/or counselors
- ( ) other (please explain)____________________________

14. To your knowledge, is there a well defined plan in your district for coordinating career education from elementary to middle to high school levels?

- ( ) Yes
- ( ) No

APPENDIX B

TABLE 1

Phase I - Teacher Interviews

QUESTION	REPLY	HOUSTON (N=60)	SAN ANTONIO (N=86)	FORT WORTH (N=119)
CAREER EDUCATION OBJECTIVES				
1. Do you think the objectives of career education can be achieved?	Yes	45	84	113
	No	5	0	0
	NR/NA	10	2	6
26. Career education could help solve unemployment problems in this area.	Strongly Agree	12	12	25
	Agree	29	64	77
	Disagree	9	5	11
	Strongly Disagree	4	0	0
	NR/NA	6	5	6
30. Many high-salaried jobs do not necessarily require a college degree.	Strongly Agree	23	17	44
	Agree	28	60	61
	Disagree	2	7	8
	Strongly Disagree	2	0	2
	NR/NA	5	2	4
31. Career education offers every individual a better chance to achieve job satisfaction.	Strongly Agree	20	19	37
	Agree	27	55	67
	Disagree	7	5	9
	Strongly Disagree	1	0	1
	NR/NA	5	7	5
32. The concepts of career education provide a good method for helping young people understand themselves.	Strongly Agree	19	20	38
	Agree	32	54	68
	Disagree	3	4	4
	Strongly Disagree	1	0	0
	NR/NA	5	8	9
34. The objectives of career education are unrealistic.	Strongly Agree	1	0	1
	Agree	7	5	6
	Disagree	31	54	74
	Strongly Disagree	14	16	31
	NR/NA	7	11	7
INSERVICE TRAINING				
2. Have you had training in recognizing and utilizing career education concepts?	Yes	22	28	55
	No	37	54	57
	NR/NA	1	4	7
3. Did you attend inservice sessions for career education?	Yes	31	49	94
	No	27	34	19
	NR/NA	2	3	6

QUESTION	REPLY	HOUSTON (N=60)	SAN ANTONIO (N=86)	FORT WORTH (N=119)
How many days?	None	31	39	42
	1	14	24	38
	2	4	7	29
	3	3	6	4
	4	1	1	2
	5	0	1	0
	6	0	3	0
	8	0	1	0
	9	7	4	4
Who conducted the inservice sessions?	Coordinator	13	22	33
	Principal	1	9	14
	Consultant	21	12	19
	Counselor	4	33	59
	Other	6	12	35
22. Inservice sessions are necessary to understand the concepts of career education.	Strongly Agree	10	26	50
	Agree	29	49	57
	Disagree	13	8	8
	Strongly Disagree	1	1	1
	NR/NA	7	2	3

CURRICULUM MATERIALS

QUESTION	REPLY	HOUSTON (N=60)	SAN ANTONIO (N=86)	FORT WORTH (N=119)
4. To what extent were you involved in preparation of career education curriculum materials?	Not At All	32	61	85
	Some	15	15	21
	Actively Participated	6	8	10
	NR/NA	7	2	3
5. Were you provided released time to help in preparation of career education curriculum materials?	Yes	11	9	14
	No	40	68	91
	NR/NA	9	9	14
How many days?	None	50	77	109
	1	1	0	0
	2	3	3	0
	4	0	1	0
	5	1	1	1
	6	0	1	5
	9	5	3	4
7. Do you receive periodic assistance in collecting and analyzing career education information and materials?	Yes	54	63	74
	No	1	22	39
	NR/NA	5	1	6
If yes, from whom?	Consultant	33	4	18
	Coordinator	22	8	16
	Counselor	5	55	43
	Other	4	14	12

QUESTION	REPLY	HOUSTON (N=60)	SAN ANTONIO (N=86)	FORT WORTH (N-119)
8. Do you feel the curriculum materials you have received on career opportunities have helped you?	Yes	47	65	87
	No	7	11	13
	NR/NA	6	10	19
25. It takes more time to prepare lessons with occupational content than those for the regular curriculum.	Strongly Agree	11	8	6
	Agree	21	37	44
	Disagree	18	32	48
	Strongly Disagree	3	2	9
	NR/NA	7	7	12
29. Teachers should receive extra remuneration to prepare career education curriculum materials.	Strongly Agree	17	16	26
	Agree	19	42	56
	Disagree	15	20	25
	Strongly Disagree	1	1	3
	NR/NA	8	7	9

EVALUATION

17. To your knowledge, is career education in your school being evaluated by an in-house organization?	Yes	18	15	8
	No	22	41	85
	NR/NA	20	30	26

STUDENT AWARENESS

16. Since career education concepts have been included in the curriculum, are students more aware of career opportunities?	Yes	35	63	88
	No	5	10	11
	NR/NA	20	13	20
11. Have your students observed career education activities in other schools?	Yes	6	2	2
	No	50	78	100
	NR/NA	4	[illegible]	17
If yes, how many times?	None	53	85	117
	1	2	0	0
	2	3	1	0
	3	1	0	0
	4	1	0	1
	8	0	0	1

QUESTION	REPLY	HOUSTON (N=60)	SAN ANTONIO (N=86)	FORT WORTH (N=119)
35. Students involved in career education are making more realistic career choices than those not involved in this program.	Strongly Agree	6	9	11
	Agree	21	36	69
	Disagree	10	4	8
	Strongly Disagree	2	0	0
	NR/NA	21	37	31
38. Since career education concepts have been included in the curriculum, students are noticeably more aware of career opportunities.	Strongly Agree	10	14	26
	Agree	29	48	64
	Disagree	7	10	9
	Strongly Disagree	1	0	2
	NR/NA	13	14	18

TECHNIQUES AND PROCEDURES

QUESTION	REPLY	HOUSTON (N=60)	SAN ANTONIO (N=86)	FORT WORTH (N=119)
9. What facilities are available to you in career education which were formerly not utilized?	AVE Materials	29	32	63
	Mini-Career Centers	3	10	45
	Library Career Corners	29	14	47
	Bulletin Boards	31	39	47
	Community Resource Personnel	26	60	61
	Other	0	20	18
10. Are you using any techniques or procedures in teaching career education concepts which are different from those formerly used?	Yes	25	33	45
	No	21	34	45
	NR/NA	14	19	29
14. Are career education concepts a part of your daily presentation in all subjects?	Yes	25	29	48
	No	25	48	64
	NR/NA	10	9	7
28. College courses should include concepts of career education.	Strongly Agree	13	16	38
	Agree	34	61	69
	Disagree	5	3	5
	Strongly Disagree	1	0	2
	NR/NA	7	6	5
33. Occupational information should be included in every subject offered.	Strongly Agree	12	9	23
	Agree	23	51	54
	Disagree	17	18	35
	Strongly Disagree	3	1	1
	NR/NA	5	7	6
36. Teachers of traditional academic courses are including occupational information in their class presentations.	Strongly Agree	4	4	2
	Agree	25	46	65
	Disagree	7	14	27
	Strongly Disagree	6	1	3
	NR/NA	18	21	22

QUESTION	REPLY	HOUSTON (N=60)	SAN ANTONIO (N=86)	FORT WORTH (N=119)
37. My own knowledge of occupational information has increased.	Strongly Agree	20	12	18
	Agree	22	55	76
	Disagree	10	10	19
	Strongly Disagree	2	1	0
	NR/NA	6	8	6
SINGLE CHANGE				
13. What single change would you make for career education in your school?	None	17	12	64
	Expand Student Service	7	6	8
	Increase the Number of Teachers	0	0	4
	More Guidance and Counseling Programs	0	1	1
	Better Teacher Preparation	3	2	3
	Better Student Selection	4	0	0
	More Materials and Resource Centers	8	7	2
	Drop the Program	5	0	0
	Other	2	4	15
	NR/NA	14	6	22
27. Teachers should be allowed to participate in career education on a voluntary basis only	Strongly Agree	10	9	12
	Agree	20	30	53
	Disagree	21	28	46
	Strongly Disagree	1	7	3
	NR/NA	8	12	5

APPENDIX B

TABLE 2

Phase II - Teacher Interviews

QUESTION	REPLY	HOUSTON (N=56)	SAN ANTONIO (N=75)	FORT WORTH (N=97)
5. Objectives for career education in your school	A concept of self which is in keeping with a work oriented society	34	43	69
	Positive attitudes about work, school and society	50	58	85
	A sense of satisfaction resulting from successful experiences in work, school and community	32	32	59
	Personal characteristics of self-respect, self-reliance, perseverance, initiative, and resourcefulness	33	38	67
	A realistic understanding of the relationship between the world of work and education	37	42	69
	A comprehensive awareness of career options in the world of work	34	51	73
	The ability to enter employment in an appropriate occupation at a productive level and/or to pursue further education	24	17	44

QUESTION	REPLY	HOUSTON (N=56)	SAN ANTONIO (N=75)	FORT WORTH (N=97)
17. Career education could help reduce the number of dropouts.	Strongly Agree	17	38	31
	Agree	25	30	57
	Disagree	6	1	2
	Strongly Disagree	3	1	1
	NR/NA	5	5	6
20. Many high-salaried jobs do not necessarily require a college degree.	Strongly Agree	21	24	27
	Agree	29	40	58
	Disagree	4	6	4
	Strongly Disagree	0	3	2
	NR/NA	2	2	6
21. Career education offers every individual a better chance to achieve job satisfaction.	Strongly Agree	11	19	25
	Agree	35	45	59
	Disagree	6	4	5
	Strongly Disagree	2	2	1
	NR/NA	2	5	7
23. The objectives of career education are unrealistic.	Strongly Agree	3	1	0
	Agree	6	4	5
	Disagree	32	54	49
	Strongly Disagree	11	10	34
	NR/NA	4	6	9
INSERVICE TRAINING				
2. How many days of inservice training in career education were provided teachers in your school this semester?	None	26	49	17
	1 or less	14	17	43
	2	4	2	21
	3	0	0	4
	4	0	3	1
	5	0	0	2
	6	1	0	0
	7	1	0	0
	8 or more	5	0	2
	NR/NA	5	4	7
3. Who conducted the inservice sessions for career education?	Coordinator	12	14	51
	Principal	4	2	18
	Consultant	20	8	27
	Counselor	2	15	23
	Other	3	5	29
16. Inservice sessions are necessary to understand the concepts of career education.	Strongly Agree	9	31	39
	Agree	26	32	42
	Disagree	16	8	8
	Strongly Disagree	2	1	1
	NR/NA	3	3	7

QUESTION	REPLY	HOUSTON (N=56)	SAN ANTONIO (N=75)	FORT WORTH (N=97)
CURRICULUM MATERIALS				
4. Were teachers in your school provided released time for the development of career education materials?	Yes	11	15	35
	No	42	55	54
	NR/NA	3	5	8
6. Reactions to career education materials.	Have not received any	0	3	8
	Provided variety in making information more effective and realistic for students	34	43	61
	Students are not interested and impressed with number of jobs available	17	36	52
	Assisted me in planning activities and selecting appropriate audio-visual materials	32	29	49
	Helped me understand how to teach and relate my subject to career education	31	35	52
	Offered abundance of new ideas and materials	23	19	42
	No consideration given to students with learning disabilities	9	6	3
	Material too advanced for elementary students	14	5	2
	Do not have time to teach any other subjects in my crowded schedule	17	15	13

QUESTION	REPLY	HOUSTON (N=56)	SAN ANTONIO (N=75)	FORT WORTH (N=97)
15. Which procedures would you recommend teachers use in selecting career education materials?	Select materials which can easily be adapted to needs of individual students	48	60	80
	Choose materials of high interest level	34	46	70
	Material should be relevant, timely and comprehensible	41	47	76
	Let counselors and consultants choose	4	5	15
	Entire staff should be involved in review and selection process	11	15	28
	Avoid essentially commercial material	17	11	20
	Carefully check the reading level	33	37	46
	Provide time for consultants to inform teachers about available material and proper use of it	31	50	60
	Other	2	4	2
19. It takes more time to prepare lessons with occupational content than those for the regular curriculum.	Strongly Agree	6	11	11
	Agree	27	34	34
	Disagree	17	24	37
	Strongly Disagree	3	2	6
	NR/NA	3	4	9

QUESTION	REPLY	HOUSTON (N=56)	SAN ANTONIO (N=75)	FORT WORTH (N=97)
EVALUATION				
13. Means used for evaluating career education in your school.	Instruments which would measure student attitudes toward world of work	24	21	46
	Observation results by teachers	30	41	49
	Compare student interest with those not involved in career education	21	34	39
	Establish follow-up program	21	33	50
	Based on stated objectives	11	11	16
	Evaluate effectiveness of inservice sessions	8	7	26
	Students, parents, teachers given opportunity to express their views on career education	24	34	50
	Ask consultants and/or counselors	7	19	18
	Other	2	3	2

QUESTION	REPLY	HOUSTON (N=56)	SAN ANTONIO (N=75)	FORT WORTH (N=97)
STUDENT AWARENESS				
8. Have your students observed career education in other schools?	Yes	7	2	3
	No	45	70	81
	NR/NA	4	3	13
11. Achievements you anticipate will be reached by your students as a results of experience in career education.	Students will be familiar with a wide variety of job opportunities	40	61	78
	Students will possess a broader knowledge of the importance of making a wise career choice	27	47	68
	Students will have a greater awareness of themselves and their role in society	32	53	70
	Encourage students to complete their high school education	24	44	61
	Offers an opportunity for a better understanding of why academic subjects are important	25	45	56
	Students will understand the importance of getting along with other people	39	42	65
	More students will achieve success on their jobs	21	23	39
	Other	6	4	4

QUESTION	REPLY	HOUSTON (N=56)	SAN ANTONIO (N=75)	FORT WORTH (N=97)
TECHNIQUES OR PROCEDURES				
7. Applicable techniques or procedures which you use only in teaching career education concepts	Using activities suggested in the curriculum guide	39	33	41
	Use of parents as role models	23	17	26
	Making career information part of every subject taught	21	29	49
	Using community resource people as speakers in all grade levels	20	24	46
	Using specific assignments from business and industry as classroom projects	15	9	19
	More practical discussions of attitudes and opportunities for achieving success in adult life	22	30	35
	Using video tape to analyze interview techniques	9	3	10
	Elementary students set up and operated grocery store	3	11	4
	Students wrote and presented TV commercials for analysis by class	5	2	3
22. Occupational informations should be included in every subject offered	Strongly Agree	15	16	15
	Agree	23	34	53
	Disagree	12	16	19
	Strongly Disagree	4	4	4
	NR/NA	2	5	6

QUESTION	REPLY	HOUSTON (N=56)	SAN ANTONIO (N=75)	FORT WORTH (N-97)
SINGLE CHANGE				
9. What single change would you make for career education in your school?	None	7	11	2
	Expand services to students	10	13	12
	Involve more teachers	11	15	17
	Offer more guidance and counseling services	12	34	8
	Better teacher preparation	10	32	18
	Better selection of students	5	2	2
	More materials and resource centers	13	21	8
	Drop the program	14	3	0
	Other	7	7	0
24. Teachers should be allowed to participate in career education on a voluntary basis only	Strongly Agree	11	13	4
	Agree	25	31	50
	Disagree	14	21	28
	Strongly Disagree	2	5	7
	NR/NA	4	5	8

APPENDIX B

Table 3

Phase I - Counselor Interviews

QUESTION	REPLY	HOUSTON (N=28)	SAN ANTONIO (N=10)	FORT WORTH (N=5)
INSERVICE TRAINING				
11. Are counselors attending inservice sessions on career education?	Yes	7	9	2
	No	20	0	3
	NR/NA	1	1	0
If yes, how many days?	None	21	1	3
	1	3	0	0
	2	3	1	0
	4	0	2	0
	5	0	1	0
	6	0	0	1
	9	1	5	1
STUDENT SERVICES				
2. Are comprehensive files of current information in the following areas organized and maintained by the counseling staff?	Educational Opportunities Including Scholarships	19	6	3
	Current Occupational Information	24	8	5
	Community Educational Opportunities	20	7	3
	Local Occupational Opportunities and Work-Study Plans	14	5	4
3. Is the guidance staff accessible to all students?	Yes	28	10	5
	No	0	0	0
	NR/NA	0	0	0
To all parents?	Yes	27	10	4
	No	0	0	0
	NR/NA	1	0	1
4. Are individual interviews with counselors provided for every student at least once a year?	Yes	21	7	3
	No	5	0	1
	NR/NA	2	3	1
Was this done before career education was implemented?	Yes	19	7	3
	No	5	0	1
	NR/NA	4	3	1
5. Is provision made for counselors to work with groups of students?	Yes	27	8	4
	No	1	1	1
	NR/NA	0	1	0

QUESTION	REPLY	HOUSTON (N=28)	SAN ANTONIO (N=10)	FORT WORTH (N=5)
6. Are employment opportunities available to students below age 14?	Yes	4	3	1
	No	21	5	4
	NR/NA	3	2	0
TESTING				
10. Is the program of guidance testing being used different from what you were doing before career education was implemented?	Yes	3	3	0
	No	15	5	4
	NR/NA	10	2	1
EVALUATION				
9. Does the guidance staff review and revise its program annually?	Yes	21	9	4
	No	5	1	1
	NR/NA	2	0	0
17. A significant increase in requests from students for occupational information has occurred since career education courses were added to the curriculum.	Strongly Agree	2	5	4
	Agree	8	3	1
	Disagree	6	1	0
	Strongly Disagree	2	0	0
	NR/NA	10	1	0
19. Study tours would increase student interest in local employment opportunities.	Strongly Agree	10	5	4
	Agree	11	3	1
	Disagree	1	0	0
	Strongly Disagree	0	0	0
	NR/NA	6	1	0
OCCUPATIONAL INFORMATION				
6. Are employment opportunities available to students below age 14?	Yes	4	3	1
	No	21	5	4
	NR/NA	3	2	0
7. Have you been doing more occupational counseling since career education was implemented?	Yes	11	6	3
	No	14	1	1
	NR/NA	3	3	1
18. Potential dropouts are experiencing success in career orientation classes.	Strongly Agree	1	0	1
	Agree	13	5	3
	Disagree	2	1	0
	Strongly Disagree	0	0	0
	NR/NA	12	4	1

QUESTION	REPLY	HOUSTON (N=28)	SAN ANTONIO (N=10)	FORT WORTH (N=5)
20. Teachers of traditional academic courses are including occupational information in their class presentations.	Strongly Agree	1	2	1
	Agree	15	7	3
	Disagree	4	1	1
	Strongly Disagree	0	0	0
	NR/NA	8	0	0
21. More career education centers should be available to students at all grade levels.	Strongly Agree	16	6	5
	Agree	7	2	0
	Disagree	0	0	0
	Strongly Disagree	0	0	0
	NR/NA	5	2	0
SINGLE CHANGE				
1. Do counselors maintain communication with teachers involved in career education?	Yes	25	10	4
	No	3	0	1

APPENDIX B

TABLE 4

PHASE II - COUNSELORS INTERVIEWS

QUESTION	REPLY	HOUSTON (N=29)	SAN ANTONIO (N=6)	FORT WORTH (N=8)
INSERVICE TRAINING				
15. How many days of career education inservice training did you attend this semester?	None	24	1	4
	1	3	1	2
	2	2	0	0
	3	0	0	1
	4	0	0	1
	5	0	0	0
	6	0	0	0
	7	0	0	0
	8 or more	0	4	0
	NR/NA	0	0	0
STUDENT SERVICES				
2. Are comprehensive files of current information organized and maintained by the counseling staff in the following areas?				
(a) Current occupational information	Yes	25	6	8
	No	4	0	0
	NR/NA	0	0	0
(b) Community educational opportunities	Yes	24	5	8
	No	5	0	0
	NR/NA	0	0	0
(c) Local occupational opportunities	Yes	16	5	7
	No	13	0	1
	NR/NA	0	1	0
3. Are individual counselor interviews provided for every student at least once a year?	Yes	22	2	4
	No	7	4	4
	NR/NA	0	0	0
4. Is provision made for counselors to work with groups of students?	Yes	29	6	8
	No	0	0	0
	NR/NA	0	0	0
If yes, which provisions are made?	Subject matter grouping	10	2	6
	Grade level grouping	26	4	7
	Occupational interest	8	2	4
	Other	5	1	2

QUESTION	REPLY	HOUSTON (N=29)	SAN ANTONIO (N=6)	FORT WORTH (N=8)
STUDENT SERVICES (Cont'd)				
5. Check any procedure used to obtain employment for students 14 years of age and under in your school.	None	18	2	4
	Teachers find jobs for students	4	0	2
	Counselors maintain job opportunities files	8	1	3
	Principal maintains job opportunities files	0	0	0
	Referrals made to school placement offices	2	3	2
	Other	4	1	2
TESTING				
8. Which of the following best describes the guidance testing program in your school?	Discontinued	24	0	0
	Never established	1	0	0
	Standardized tests	3	3	5
	Testing restricted to certain grade levels	1	1	0
	NR/NA	0	2	3
EVALUATION				
13. In your opinion what means should be used for evaluating career education in your school?	Instruments which would measure student attitude toward world of work	17	2	3
	Observation results by teachers	8	3	6
	Compare student interest with those not involved in career education	16	3	4
	Establish follow-up program	8	3	6
	Based on stated objectives	3	1	0
	Evaluate effectiveness of inservice sessions	4	3	1
	Students, parents, teachers given opportunity to express their views of career education	12	4	6
	Ask consultants and/or counselors	2	1	1
	Other	0	0	0
14. To your knowledge is there a well defined plan in your district for coordinating career education from elementary to middle to high school levels?	Yes	14	6	8
	No	13	0	0
	NR/NA	2	0	0

QUESTION	REPLY	HOUSTON (N=29)	SAN ANTONIO (N=6)	FORT WORTH (N=8)
OCCUPATIONAL INFORMATION				
6. Have you been doing more occupational counseling since career education was implemented in your school?	Yes	10	4	4
	No	19	1	4
	NR/NA	0	1	0
10. Information about jobs available 5-10 years from now in your area can be obtained from which of the following:	Current trade journals	10	1	2
	Employment Commission	12	1	2
	School Placement Officers	0	3	2
	Local Chamber of Commerce	8	3	1
	Local labor union representatives	3	0	1
	U. S. Census	2	0	1
	U. S. Dept. of Labor	18	2	8
	Community business leaders	14	1	1
	Other	0	1	1
12. The number of academic subject matter teachers including occupational information in their presentations is noticeably increasing.	Yes	14	3	7
	No	12	2	1
	NR/NA	3	1	0
SINGLE CHANGE				
1. Do counselors maintain communication with teachers involved in career education?	Yes	27	6	8
	No	1	0	0
	NR/NA	1	0	0
9. What single change would you make for career education in your school?	None	0	1	0
	Expand services to students	2	0	3
	Involve more teachers	4	2	3
	Offering more guidance and counseling services	4	1	0
	Better teacher preparation	3	2	0
	Better selection of students	1	0	1
	More materials and resource centers	4	1	2
	Drop the program	1	0	0
	Other	0	0	2

APPENDIX B

TABLE 5

PHASE I - ADMINISTRATOR INTERVIEWS

QUESTION	REPLY	HOUSTON (N=13)	SAN ANTONIO (N=10)	FORT WORTH (N=10)
CAREER EDUCATION OBJECTIVES				
6. Are the career education objectives in your school in accord with the objectives for the total school program?	Yes	11	9	9
	No	0	0	0
	NR/NA	2	1	1
24. Career education objectives can be achieved.	Strongly Agree	8	3	5
	Agree	5	3	4
	Disagree	0	0	0
	Strongly Disagree	0	0	0
	NR/NA	0	1	1
EVALUATION				
1. Is your school community actively involved in career education?	Yes	10	8	8
	No	2	2	1
	NR/NA	1	0	1
21. Results of in-house evaluations should be available to administrators upon request.	Strongly Agree	8	5	4
	Agree	5	1	3
	Disagree	0	0	1
	Strongly Disagree	0	0	0
	NR/NA	0	1	2
TEACHER RELATED INFORMATION				
2. How much time was provided for teachers to attend career education inservice sessions?	None	6	2	2
	1 day	1	6	1
	2 days	3	1	5
	3 days	0	0	2
	6 days	0	1	0
	9 days	3	0	0
4. Were teachers provided released time for development of career education material?	Yes	7	2	7
	No	4	8	2
	NR/NA	2	0	1
18. Teachers should receive extra remuneration to prepare career education curriculum materials.	Strongly Agree	5	3	4
	Agree	1	3	3
	Disagree	4	0	2
	Strongly Disagree	3	0	0
	NR/NA	0	1	1

QUESTION	REPLY	HOUSTON (N=13)	SAN ANTONIO (N=10)	FORT WORTH (N=10)
19. Classes in career education should only be taught by teachers with vocational teaching certificates.	Strongly Agree	3	2	1
	Agree	3	0	2
	Disagree	2	2	4
	Strongly Disagree	5	2	2
	NR/NA	0	1	1
SINGLE CHANGE				
10. What single change would you make for career education in your school?	No change	2	4	4
	Expand student services	3	0	4
	Increase number of teachers	2	1	1
	Better teacher preparation	0	1	1
	Better student selection	1	0	0
	Resource centers	1	0	0
	Others	2	2	0
	NR/NA	2	1	0
GENERAL				
3. Do local advisory committees participate in planning of career education in your school?	Yes	7	4	7
	No	6	6	2
	NR/NA	0	0	1
7. Do you feel that study tours are an integral part of career education?	Yes	13	10	9
	No	0	0	0
	NR/NA	0	0	1
If yes, how many study tours are scheduled for classes involved in career education per semester?	None	6	0	2
	1	1	2	1
	2	0	0	0
	3	4	2	2
	4	0	2	2
	5	0	0	1
	7	1	0	0
	9	1	4	2

APPENDIX B

TABLE 6

Phase II - Administrator Interviews

QUESTION	REPLY	HOUSTON (N=13)	SAN ANTONIO (N=5)	FORT WORTH (N=8)
CAREER EDUCATION OBJECTIVES				
5. Items which describe the objectives for career education in your school.	A concept of self which is in keeping with a work oriented society.	10	3	7
	Positive attitudes about work, school, and society	12	5	8
	A sense of satisfaction resulting from successful experiences in work, school, and community	9	2	7
	Personal characteristics of self-respect, self-reliance, perseverance, initiative, and resourcefulness	11	5	8
	A realistic understanding of the relationship between the world of work and education	12	5	8
	A comprehensive awareness of career options in the world of work	8	4	5
	The ability to enter employment in an appropriate occupation at a productive level and/or to pursue further education	7	2	2
10. Items indicating direction career education should take in the future in your school	Greater involvement of business and industrial community	4	3	4
	Correlate with all subject matter	8	2	7
	All students should receive career information	6	1	6

QUESTION	REPLY	HOUSTON (N=13)	SAN ANTONIO (N=5)	FORT WORTH (N=8)
10. Continued	More effective teacher training programs	4	2	3
	All schools in the system should be involved	4	0	7
	Carefully planned in-service for all school personnel	6	3	8
	Other	0	1	0
EVALUATION				
7. Items you believe to be strengths of career education in your school	Increased student awareness to world of work	13	4	7
	Curriculum materials are relevant and interesting	7	4	7
	Services provided teachers by career counselors and/or consultants	7	4	8
	Involvement of resource personnel in career education activities	8	3	7
	Students developing positive self image	12	2	7
	Others	0	0	0
8. Items you believe to be weaknesses of career education in your school	Inadequate communication systems with district administrators	2	1	0
	Confusion as to objectives of career education	4	1	3
	Lack of curriculum materials for all grade levels	6	1	1
	No time to properly train teachers in use of career education materials	6	3	2
	All students should receive information	8	1	1
	Need trained personnel available in each school on a regular basis	3	4	5
	More funds needed for suggested activities	6	4	2

QUESTION	REPLY	HOUSTON (N=13)	SAN ANTONIO (N=5)	FORT WORTH (N=8)
11. The local school system is evaluating career education in my school	Yes	8	4	7
	No	4	0	1
	NR/NA	1	1	0
12. Who is conducting the evaluation activities in question 11?	Don't know	0	0	0
	Principal	3	1	2
	Counselor	0	1	0
	Consultant	3	0	2
	Research Dept.	4	1	1
	Superintendent	0	3	3
	Subject Matter Supervisor	2	1	2
	Teachers	2	1	1
	Others	1	2	1
13. What means should be used for evaluating career education in your school?	Instruments which would measure student attitudes toward world of work	8	2	3
	Observation results by teachers	4	1	6
	Compare student interest with those not involved in career education	5	2	4
	Establish follow-up program	7	3	1
	Based on stated objectives	5	0	2
	Evaluate effectiveness of inservice sessions	2	0	1
	Students, parents, teachers given opportunity to express their views of career education	11	4	7
	Ask consultants and/or counselors	2	3	1
	Other	0	0	0
TEACHER RELATED INFORMATION				
2. How many days of inservice training in career education were provided teachers in your school this semester?	None	4	2	3
	1	5	2	3
	2	2	0	2
	3	0	0	0
	4	0	0	0
	5	1	0	0
	6	0	0	0
	7	0	0	0
	8 or more	0	0	0
	NR/NA	1	1	0

QUESTION	REPLY	HOUSTON (N=13)	SAN ANTONIO (N=5)	FORT WORTH (N=8)
4. Were teachers in your school provided released time for development of career education materials?	Yes	10	0	5
	No	3	5	3
	NR/NA	0	0	0
SINGLE CHANGE				
9. What single change would you make for career education in your school?	None	0	1	0
	Expand services to students	4	0	1
	Involve more teachers	3	2	0
	Offer more guidance and counseling services	2	3	1
	Better teacher preparation	2	1	0
	Better selection of students	0	0	2
	More materials and resource centers	2	0	2
	Drop the program	0	0	0
	Other	0	0	0
GENERAL				
3. Do local advisory committees participate in career education planning in your school?	Yes	7	2	8
	No	5	3	0
	NR/NA	1	0	0
6. How many field trips were scheduled in your school this semester as part of the career education experience?	None	2	0	1
	1	4	0	0
	2	2	0	1
	3	3	1	0
	4	0	0	0
	5	0	0	0
	6 or more	2	4	6
	NR/NA	0	0	0
14. To your knowledge, is there a well defined plan in your district for coordinating career education from elementary to middle to high school levels?	Yes	7	4	7
	No	6	1	1
	NR/NA	0	0	8